


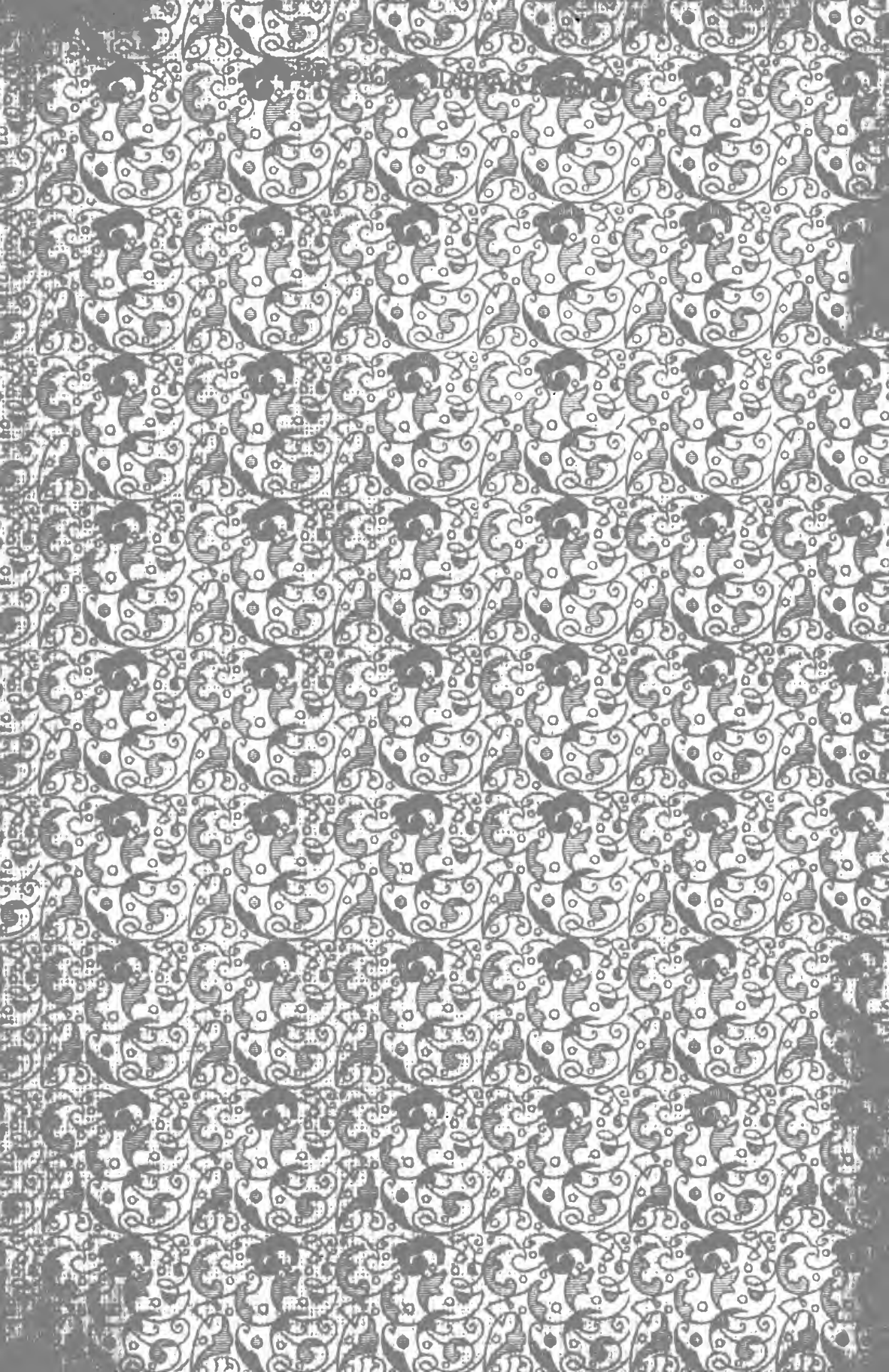
SUTER
SFAC

X



Book No. 352 P11301 *Accession* 114729

NOT TO BE TAKEN FROM THE LIBRARY



Digitized by the Internet Archive
in 2010 with funding from
San Francisco Public Library



PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO
THE MUNICIPAL LEAGUE OF MONTANA
—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Municipal Achievements of 1915	3
New York World's Largest City	20
Ground Water Supplies and Wells	21
League of Washington Municipalities	23
Infringement on Patent Claimed	24
Notes and Comment	25
Preferential Voting at Santa Monica	26
Letter from the Cameron Septic Tank Company	28
What Our Pacific Coast Cities Are Doing	29
Titles of New Ordinances Received	32
Lower Lighting Rates for San Jose	35

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

NEW FORMS

To comply with 1915 Amendments to 1911 Act

An Entire Change of Forms and Records under this Act

If you are operating under the 1911 Act and Amendments, you will need the new forms as there have been many important changes.

WE CAN SUPPLY THE CORRECT BLANKS

You will need new sheets for your Street Superintendent's record, as all forms have been changed.

Our Publication the "Improvement Act of 1911" is being revised by W. J. Locke and will be ready for delivery shortly. This booklet will contain very valuable information and you will find it indispensable.

A. CARLISLE & CO.

SPECIALISTS IN MUNICIPAL SUPPLIES

251-259 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

HERE'S THE SOLUTION

OF YOUR OLD MACADAM ROADS

SURFACE THEM WITH

BITULITHIC

Bitulithic surface has been used to a great extent for surfacing macadam roads in a number of cities with most gratifying results.



BOSTON, MASS.

Bitulithic Pavement. Columbia Road (at Hewins Street). Laid over old Macadam, 1915

Bitulithic surface can be laid on old macadam and give entire satisfaction.

It is false economy to keep repairing your old macadam roads when by using the old macadam, the usefulness of which as a road for travel has passed, as a foundation for the Bitulithic pavement you save the expense of laying a new concrete foundation and stop the large maintenance cost you now expend yearly.

It is cheaper to have a good substantial bituminous surface in the beginning than to have cheap, inferior construction which has to be repaired within a year or two after it is laid.

Many cities have found this out and over 340 cities throughout the United States and Canada have adopted Bitulithic as the standard pavement for their streets.

Let us give you the benefit of our many years' experience in the street paving industry.

Bitulithic Once — Bitulithic Always
It is the pavement you are looking for.
Why Not Build for all time
When It Costs Very Little More.
Specify Bitulithic

Write today for illustrated booklets.

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
50 Church St.

Los Angeles, Cal.
926 Calif. Bldg.

Richmond, Va.
Virginia Railway & Power Bldg.

Chicago, Ill.
10 So. La Salle St.

Portland, Ore.
Journal Bldg.

St. Louis, Mo.
Railway Exchange Bldg.

Rochester, N. Y.
303 Main St. West

Phoenix, Ariz.
204 Noll Bldg.

Nashville, Tenn.
Independent Life Bldg.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-	-	(City Attorney of Napa)	-	-	WALLACE RUTHERFORD
Second Vice-President	-	-	-	(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON				Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Callexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Corcoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropic, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX ^{*352}_{P11 30} EIGHTEENTH YEAR

No. 1

EDITORS ¹¹⁴⁷³⁹ - - H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA
JOHN H. RUSSELL, PH. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON
N. E. ENTRIKN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

JANUARY, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

MUNICIPAL ACHIEVEMENTS OF 1915

During the month of November the following circular letter was sent out to the various city clerks in the state:

The League would like to secure for publication in the January number of PACIFIC MUNICIPALITIES a progress report of your city covering the notable improvements made and achievements accomplished during the past year. Will you kindly complete such a report, stating facts concisely, and transmit the same by the 15th of December.

In response to the request a large number of reports have been received and are herewith published. They show that there has been a considerable degree of activity on the part of municipal officials and indicates that marked progress has been made during the year just ended. Many cities have not reported, but this must not be taken as an index that those making no report

have been idle. Doubtless many of them can show equally favorable action, but are modest in advertising their claims. Following are the reports received:

ALAMEDA.

\$100,000 tax levy for the improvement of the entire length of Central Avenue.

The passage of \$300,000 bonds for new school houses, additions to existing schools and the purchase of school property.

The passage of an initiative ordinance levying a one cent tax for a Relief Fund for the unemployed.

Sand-blasting and painting and otherwise improving the exterior of the City Hall.

The purchase of a caterpillar engine for the use of the Street Department.

The placing of \$3,000 in the budget for a Freeholders' election.

The macadamizing of Lincoln Avenue, between Everett Street and Mound Street.

The permanent improvement of Park Street, between Buena Vista Avenue and the Tidal Canal and of Webster Street, between Atlantic Avenue and Buena Vista Avenue.

The motorizing of three horse-drawn pieces of fire apparatus.

The construction of a municipal garage.

The establishment of a Municipal Reference and Educational Bureau.

R. E. BOSSHARD, City Clerk.

ANAHEIM.

New Improvements—New 16" well and motor installed cost \$3,562.00; streets oiled and graded cost \$12,350.00; sewer extensions cost \$1,235.00; 64 ornamental street lights installed cost the property owner \$1.00 per front foot and the city \$35 per ft. Contract awarded for sewer extension costing \$5,090.00. No delinquent taxes for 6 years.

EDWARD B. MERRITT, City Clerk.

ARCADIA.

On the 22nd day of September, 1914, the people of Arcadia, by a three-fourths majority vote, voted bonds in the sum of \$131,250.00 for the building of a municipal water system, and on the same day voted bonds in the sum of \$150,000.00 for the building of approximately 16½ miles of oiled macadam roads, cement curbs and gutters.

The bonds have been sold and the water system is well on the way towards completion. Three wells have been completed, each of a capacity of about 200 inches, and the fourth well is now being drilled.

Two one million gallons capacity reservoirs have been completed and the

water mains are about half in place. Water for both domestic and irrigating purposes will be available after April 1, 1916.

The contract for the building of the roads has been let and active work will begin not later than Dec. 15, 1915.

During the past year about 10 miles of our streets have been planted to ornamental shade trees, making in all about 95% of our streets so planted. The spirit of progress has taken a firm hold of our people and we expect to accomplish much.

GEO. E. GRIMES, City Clerk.

BENICIA.

The notable improvements and achievement of the City of Benicia during the past year: The completion of oil macadam pavement from East Fifth and M Streets to meet the State Highway at the city limits, at a cost of \$10,000; equipped the Fire Department with a Pope Hartford auto combination chemical and hose car.

J. C. McARAVY, City Clerk.

BERKELEY.

\$500,000 school bonds. Five new schools built and equipped.

\$1,800,000 new buildings on the University of California campus.

20 new factories.

\$500,000 sewer system, combined sanitary and storm.

1,320 building permits issued.

\$3,420,000 new buildings constructed.

Increase in new and latest type of apartment houses.

Large number of fine homes increasing Berkeley's residential value.

3 new churches.

2 clubs (buildings).

Plan of district lighting with conduit system started.

Wahl billing machine and system installed in offices of Assessor, Auditor and Treasurer.

\$750,000 improvement in streets, including permanent and high grade paving of three main thoroughfares, Grove Street, Adeline Street and Shattuck Avenue.

\$10,000 concrete bridge constructed in Walnut Street.

4 automobiles and one motor truck added to Street Department equipment.

Enlargement of Park system.

Extension of Playground system.

Repair of Municipal Wharf.

New Tree Planting Act in successful operation in entire Northbrae District.

Fire Department has installed Double Platoon system, with men on full pay, no call men.

9 fire stations in operation; 16 automobiles—department completely motorized; corporation yard where all repair work is done by city.

A. G. BRIGGS, City Clerk.

BURLINGAME.

The achievements accomplished by this city during the year 1915 were as follows:

Paving, 291,320 square feet, curbs and a few sidewalks where not already laid. Total cost, \$50,844.80. 10 concrete bridges, \$23,062.00. Total, \$73,906.80.

J. R. MURPHY, City Clerk.

CORONADO.

The Boulevard on the Ocean front has been completed at a cost of \$45,000. It is of asphalt-concrete, lighted by electricity from sixteen ornamental standards, and protected by a sea wall which breaks the force of the waves during periods of storm.

Eleven miles of surface-oiled streets with sidewalk and curb have been completed during the year at a cost of \$365,000 and the city now has a con-

tinuous paved boulevard encircling it, five miles in length.

Some forty-five new street lights will be in place by the end of the year, and eight additional fire hydrants have been installed.

Building permits for the eleven months amount to \$181,000, an increase over 1914 of \$30,000.

The Board of Health has waged intelligent war on flies and mosquitoes, and the cleaning up of vacant lots has been made compulsory. Fifty-four houses have been connected with the public sewer system, and now practically every house in the town is so connected.

An 18 inch storm drain has been put in which takes care of the storm water from all over the city, and additional park areas have been acquired. An adding machine has been purchased for the City Hall, greatly facilitating the work in the office, and the equipment has been enlarged by an up-to-date gasoline road roller and a complete oil heating plant.

W. TILDEN CLARK, City Clerk.

CLAREMONT.

I am glad to report that Claremont has made a consistent growth during the past year. Permanent roads and streets have been built in the city at an expense of about \$30,000. This includes the State Highway of something over a mile, which was constructed for about \$20,000, and concrete work on East 6th Street, amounting to about \$7,000.

Street trees have been planted on the principal streets throughout the residence section of the town, and about three miles of concrete sidewalks have been constructed during the past year.

About \$240,000 have been spent in the erection of buildings. This amount includes the construction of a very fine music hall and auditorium by Pomona College at a cost of about \$100,000, and

a pre-cooling plant built by the Union Ice Company costing about \$100,000, the balance being composed of residences and bungalows.

A branch of the County Library has been established in Claremont. This library is used by about 1,800 people and has had a circulation of about 19,000 during the past year.

E. E. JONES, City Clerk.

DALY CITY.

The year 1915 witnessed the completion and putting into successful operation of the Municipal Water System. A reduction in the insurance rates caused by increased fire protection from the new system was secured. For 1916 there is proposed over \$300,000.00 street improvements. About \$200,000.00 of this is being advertised for at the present time.

Several miles of sanitary sewers have been installed in the past year.

CHAS. L. BIEBEL, City Clerk.

DINUBA.

The City of Dinuba paved 12 blocks of streets with a 4½ inch of concrete base and a 2 inch wearing surface of the Warren brothers formula at a cost of \$61,365.64, divided as follows: \$58,271.48 was the contractor's bid for the work and the sum of \$3,094.16 was the cost of printing and inspecting the work.

The paving contractors also laid 1,562 feet of 16 inch storm sewer at a cost of \$2,108.70, 80 feet of 12 inch at a cost of \$100.00, 81½ feet of 8 inch at a cost of \$61.13.

The city also called for bids for an additional extension to the storm sewer and the paving company bid \$1,575.00 for the work, which was the lowest bid received. The city rejected all bids and the Street Superintendent was instructed to proceed with the work. He did the

work at a cost of \$983.99, saving the city the sum of \$591.01.

The city also enlarged the water mains in the paved districts. These mains were enlarged to take care of the demands for several years to come.

J. H. THOMPSON, City Clerk.

EL CAJON.

Entered into contract with San Diego Gas and Electric Company to light the streets of our little city.

Has just awarded to W. D. Hall Co. of this city contract for installing water distributing system, covering the main part of the city. Contract is for \$7,042.

Board of Trustees had previously contracted with Cuyamaca Water Company for water from the flume and had run a 4" main pipe line from the flume to center of town—about 1½ miles.

LEE T. MEACHUM, City Clerk.

ETNA.

The only improvements made in our town within the past year is the installation of an outfall sewer system, with an Imhoff septic tank, which is giving good satisfaction up to the present.

M. F. SMITH, Clerk.

FERNDALE.

In answer to request for report of progress of this town during past year, will state that the most important was the building of a Town Hall, upper floor devoted to Town offices and assembly room; lower floor devoted to housing fire apparatus, being open, with concrete floor, and having fire bell on tower over building. Same is located in center of business section of town.

A. W. BLACKBURN, Clerk.

HERMOSA BEACH.

While the city government has met and disposed of a number of problems during the past year, I think that the

building and furnishing of a City Hall is about the only thing that could be properly called an achievement.

We also built about three miles of new streets under the bond act, on which was laid 392,565 square feet of asphalt pavement and cement pavement; also 5,180 feet of main sewer line with laterals, all at a cost of \$89,781.00.

B. F. BROWN, City Clerk.

IMPERIAL.

The City of Imperial during the last year has laid about 11,460 feet of 4" water mains, has built two large settling basins at the water plant, one a concrete basin. The city has also just sold \$65,000 bonds for a 33 inch outfall sewer, work on which will commence in the next month.

LELIA FOSTER, City Clerk.

JACKSON.

The City of Jackson, California, has improved its Fire Department to the extent of about \$1,000.00 during the year 1915, and are making arrangements to install a \$4,000.00 chemical engine.

We have done considerable street work or improvement during the year, and have published a resolution of intention to make improvements on Water and Main Streets amounting to about \$2,000. The work mentioned is to take off the Ginoecchio and Masonic corners on Main and Water Streets. The object is to widen the streets mentioned at both corners, being that they are dangerous to life and limb as they are at present.

Taking everything into consideration we are getting along nicely, and expect before very long to have an up-to-date mountain city.

C. M. KELLEY, City Clerk.

LAKEPORT.

Our chief improvement, not yet completed, is to be a park on our lake front,

in the middle of which is to be located the Carnegie Library given to our town. It will be some time before this is completed or the building erected.

Our water system has been entirely metered and our method of rating for use of water placed on a meter basis. This has resulted in a noticeable saving in the amount of water used, eliminating a large waste, and causing a saving in the amount of power used in pumping, and has enabled us to make a material reduction in rates to the consumer.

We have also re-graded some of our streets, forming the approaches to the town from the country, and have heavily graveled the same.

The Trustees have effected a material saving in the cost of the town's teaming by purchasing its own horses and wagons, rather than hire teams and wagons and drivers, as under our old method, and paying for the same by day rates.

GEO. H. NEAL, Town Clerk.

LODI.

During the past year the City of Lodi has paved under private contract 1.2 miles of streets at a cost of \$43,637; laid 1 mile of cement sidewalks; added 3,000 feet to the sanitary sewer system, and has under construction 3,000 feet 18 inch additional to be combined sanitary sewer and storm drain; constructed 1 mile of storm sewers; opened and graded one new street; installed 1 new Diaphone operating unit and whistle machine for fire alarm; purchased 1,000 feet of new fire hose; purchased land for a public dumping ground. Also entered into a new contract for the purchase of electric current at the rate of \$1.80 per K. W. for maximum demand and .0056 for energy consumed. The rate to consumers is 4c and 6c per K. W. H. for light and power.

H. S. CLARK, City Clerk.

LONG BEACH.

Commission form of government instituted July 5, 1915.

\$300,000.00 expended on extension of water mains.

\$10,000.00 expended on the construction of an addition to the Municipal Docks.

7.79 miles of new paved streets, together with several miles of ornamental lights.

Construction of new outfall sewer system at a cost of \$215,400.00.

Construction of a new sewage disposal plant at a cost of \$39,400.00.

Construction of a new pier at a cost of \$50,000.00.

\$20,000.00 expended in dredging harbor.

HARRY RILEY, City Clerk.

LOS BANOS.

The City of Los Banos has caused 14 blocks of paving to be laid, curb and gutters, with cement concrete curb and gutter, and paved between the gutter line with a pavement consisting of a cement concrete base five inches thick and an asphaltic wearing surface one and one-half inches thick, corrugated iron culvert and corrugated iron return culvert and manhole.

The second contract was awarded to lay six blocks of paving.

SEARCY D. MCPHAIL, City Clerk.

LOS GATOS.

During the past year Los Gatos has paved El Monte Hill, thus completing over two miles of paved streets, connecting with the State Highway on South Santa Cruz Avenue. Other streets have been graded, the whole cost being about \$7,500. A sewer had been laid on Market Street and the sewer outlet been improved at a cost of \$1,392. Parks and walks and smaller improvements amount

to \$680. Nearly five miles of cement sidewalks, curbs and gutters are now in the course of construction. A \$6,000 auto chemical engine has been purchased for the Fire Department. Improvements started by the Town Board have been generously aided by property owners, so that the improvements in our little town are really more than our records show.

DONNA M. WINNING, City Clerk.

LOYALTON.

The Town of Loyalton has erected a hydro electric light and power plant, which is in full operation and giving satisfactory results.

PAUL J. MEROUX, Clerk.

MARYSVILLE.

The work accomplished during the year has been as follows:

Joint construction with Yuba County of a graded highway, the cost to the city being \$5,000.

Installation of steel cells in the city jail at a cost of \$3,000.

Purchase of 1,000 feet of first-class fire hose.

Installation of something like 30 new fire plugs, which at the present time makes one at almost each corner of the block in the thickly settled districts.

Grading and oiling of the principal unpaved streets in the city.

Called special bond election for the extension of drainage sewer and the filling of certain low lands which will become the property of the city. The election carried almost 5 to 1 and the work is now over half completed. The cost of the sewer extension is to be 13,550.00 and the filling of the land something like 13,000.00. This work is in connection with an inland lake covering something like 14 square blocks and of which the city already owns one-half,

and this improvement will no doubt act as a starter for a beautiful park in the future.

The building of concrete retaining wall with iron railing at the approach of the new \$134,000.00 concrete bridge spanning the Yuba River at the entrance of the city.

Overhauling of the fire alarm system and installation of system of testing out each alarm box once each week.

H. G. NIEBLING, City Clerk.

MAYFIELD.

The Town of Mayfield can report progress as follows:

The completion of the paving of Main Street with a seven inch oil cement macadam pavement, the said street being in fact a part of the California State Highway, and which should have been paved by the State Highway Commission.

The official changing of the grade of Main Street so as to provide for the paving of the same where the Southern Pacific tracks cross said street.

The building of a solid concrete street crossing across Lincoln Street at the postoffice building.

The construction of two large reinforced concrete gutters as a permanent part of the town's drainage system.

The commencement of the necessary legal proceedings for the paving of a large number of streets and avenues in College Terrace and Evergreen Park with a sixteen foot oil macadam pavement, the said work to be completed in 1916.

C. F. WRIGHT, City Clerk.

MOUNTAIN VIEW.

The town has made improvements as follows:

Resurfaced the paving on principal business streets, graded, graveled and rolled most of the streets in the residence district, installed a new electric sign at

the foot of Castro street, installed a new and up-to-date system of street lights.

It is claimed that Mountain View is now the best lighted town in the Valley outside of San Jose.

S. A. WINNEGAR, Town Clerk.

NAPA.

Napa City completed a \$10,000.00 storm sewer, draining North Napa, which will relieve the city during flood periods.

Acquired the necessary land and rights of way to straighten the channel of Napa River, with the assurance that the Rivers and Harbors Committee of Congress will recommend the necessary appropriation for straightening and dredging the River, which will greatly facilitate commerce between Napa and other navigable ports.

DAVID C. SCRIBNER, City Clerk.

NATIONAL CITY.

Park Improvement.

Grading.....	\$3,366.55
Cement Work.....	1,263.01
Drain and Water Pipe.....	1,243.55
Pergola.....	169.27
Grand Stand.....	162.08
Shrubs, etc.....	424.05
Miscellaneous.....	2,377.12
Total.....	\$9,005.63

Construction of a storm drain, 24 inch main, with catch-basins, wing walls, manholes, etc., at a cost of \$1,808.17. Lowest bid received, \$2,350.00. All bids rejected and done by day's labor, using residents of the city, saving thereby \$541.83.

Fire-proof vault in City Engineer's office with steel shelving, etc., at a cost of \$409.06.

A telephone alarm system for night-watchmen connecting with the fire station, at a cost of \$267.25.

Under construction, contract price of \$374.00, a reinforced concrete culvert

3 feet by 5 feet inside, 50 feet between headwalls.

NEVADA CITY.

The activities of the Board of Trustees during the past year were mainly directed to the betterment of sidewalks. By reason of unusual topographic features of the city the construction of sidewalks presented very complicated problems, and the work involved the construction of retaining walls along the property lines which were paid for by the city. It also furnished the gravel required and the rest was paid for by the property owners under the provisions of the Local Improvement act of 1901. There has been more than a mile constructed.

An additional reservoir to the water system was constructed and additional pipes laid. The system is one of the most complete to be found anywhere and gives ample fire protection and unlimited supply for domestic use. The revenues pay for all betterments.

A combination chemical and hose wagon has been recently purchased and it is the intention to add a motor truck and hose wagon.

G. H. CALANAN, City Clerk.

OROVILLE.

There was but one notable achievement accomplished in Oroville during the past year, that was the paving of forty-seven blocks of streets under the Vrooman Act of 1911 at a cost of \$132,000. Warrenite bitulithic was used.

E. J. MITCHELL, City Clerk.

PACIFIC GROVE.

The most important achievement of the City of Pacific Grove for the year 1915 was the installation of the present street lighting system. We pay \$1,965.60 for ninety-one 100 c. p. incandescent lights, whereas we formerly paid \$3,360.00 for thirty-five arc and four incandescent

lights, thus not only saving \$1,394.40 per annum, but we think we have the best lighted city of its size in the state.

E. S. JOHNSTON, City Clerk.

PALO ALTO.

Perhaps the most notable improvement made in Palo Alto during the year has been the putting in operation of a garbage destructor plant, which has proved satisfactory from all points of view and has been made self-sustaining. The cost of the plant complete was \$15,000.

A further efficiency improvement was the installation in the municipal power plant of a Koerting Diesel engine, which has increased the capacity of the plant and effected a saving in the cost of fuel of \$7,000 per year. The engine cost \$29,000.

A contract was let for three miles of concrete pavement, but the contractor failed to do the work. Proceedings have been instituted to pave seven miles of streets during 1916.

The scope of the Health Department was materially broadened during the year. Under the work of this department the health of the city has steadily bettered and Palo Alto has as low a death rate as any city in the United States.

One new feature in the city government for the year was the establishment of a municipal lodging house to care for the traveling unemployed. The movement was a success at small cost and the lodging house will be continued during the present winter.

FRANK KASSON, City Clerk.

PETALUMA.

In addition to the ordinary routine of improvements, we have made, in the past year, the following extraordinary improvements:

On Washington Street from the railroad depot to the business center (a distance of about 1,800 feet) we have made an entirely new street consisting of six inches of concrete base with one and one-half inch Topeka finish.

The width of this street is seventy feet; the approximate cost being about \$15,000.00.

Have installed on this street twenty-two five-light electroliers at a cost of about \$1,300.00, which gives us practically a daylight street from the depot to business section at all times.

On Bodega Avenue (in residence district) there has been about one thousand feet of concrete street laid, which is to be covered either with regular State Highway or Topeka finish.

On various other streets we have rebuilt, with macadam base and oil finish, about one mile.

A new concrete bridge was installed on Sixth Street, crossing Thompson Creek.

We have also purchased a new "Smith Hot Mixer" for the purpose of making general repairs and doing patch work on streets.

A five-ton "Tandem" roller was installed to be used in connection with such work, and for general other light jobs.

Along the water front we have constructed about 550 feet of bulkhead wharf, and contemplate other extensive improvements in this line in the near future.

The city has purchased one "White" combination chemical and hose truck for the Fire Department.

The new high school is nearing completion at a cost of \$120,000.00, and is considered one of the finest in the state, being modern in every particular.

Our public parks have been equipped with the latest apparatus in the children's play-grounds, and every effort has

been made for the health and enjoyment of the growing generation.

F. B. SINGLEY.

City Clerk and Auditor.

PIEDMONT.

As to the progress of our city, will state as follows:

The purchase of two park and playground sites.

The planting of two hundred trees on our city streets.

Addition to our City Hall building. \$2,000.00.

New Ford automobile for the Fire and Police Department.

2,000 feet of hose for the Fire Department.

The making of approximately three miles of new streets.

P. F. HOWARD, City Clerk.

PLACERVILLE.

Relative to the improvements by the city of Placerville for the last year. I herewith give you some of the expense the city has been to for improvements during 1915.

The city has built one cement bridge at a cost of \$1,000.00, and has also cut off a point of the hill in the lower end of the city, so as to give room for the Lincoln Highway through the city at a cost of \$7,000.00, and has put in 2,000 feet of new sewer and about the same amount of storm pipe at a cost of \$2,300.00.

Now we are looking for a chemical fire engine, which the Trustees will try and get in 1916; and also are looking for a new rock crusher.

CHAS. H. WEATHERWAX, City Clerk.

POMONA.

During the past year this city (Pomona) has made the following very substantial improvements, viz.:

1. Constructed $9\frac{1}{2}$ miles of asphalt pavement of 4-inch concrete base and $1\frac{1}{2}$ inches wearing surface at a cost of \$165,000.00.

2. Established over 200 ornamental street lights covering about 4 miles of streets.

3. Built a handsome bath house and concrete plunge in Ganesha Park at a cost of \$5,000.00.

4. Constructed concrete storm drain costing between \$9,000 and \$10,000.

We are also having the sides of the streets on which the new pavement was laid graded, oiled and otherwise improved where necessary.

We consider said improvements were worth the outlay and a long stride towards the attainment of an up-to-date little city.

T. ⁵/_A R. TROTTER, City Clerk.

REDLANDS.

Although there has been a general wave of depression in money matters our city has kept up its progressive stride, and the past year has witnessed the completion of our \$600,000.00 municipal water plant, one of the best to be found throughout all California; the purchase of new quarters for its offices at a cost of \$30,000.00, paid for without the aid of a bond issue; the streets kept in their usual good repair; and the building of an open air amphitheatre and bandstand. This amphitheatre is located in Smiley Park, just beyond our public library, and easy of access to the public. It is used by the Municipal Band for its weekly concerts; by the churches of the city for their union services on Sunday evenings during the summer months, and by the public in general. It has a seating capacity of about 2,500 and cost \$5,000.

Our tax rate has remained the same for the past six years, \$1.30 on the \$100.

RICHMOND.

In response to your request of November 18, I am herewith inclosing you progress report of this city for the past year.

The street work and sewer work data as compiled by H. D. Capman, City Engineer and Superintendent of Streets, represents work that has been completed this past year, and in addition thereto, I might say that we have outstanding street improvement contracts approximating \$13,000, and we have just signed a contract for the grading of streets and construction of sanitary sewers with a sump and pumping plant in the Canal Subdivision in this city at a contract price of \$95,844.48.

The general building within the City of Richmond as taken from the monthly reports of the building inspector show, since January 1, that there have been issued 285 building permits, and the value of buildings for which permits were issued amounts to \$231,825.

We have also let a contract for the construction of a steel and concrete wharf on our outer harbor at a price of \$212,000, work on which is under way at this time, and this year has seen the completion of our municipal tunnel and highway to the water front, consisting of a concrete tunnel approximately 600 feet long and a concrete and asphalt highway 60 feet in width and approximately 5,000 feet long, the cost of which is approximately \$400,000.

A. C. FARIS, City Clerk.

The following additional details are furnished by H. D. Chapman, City Engineer:

STREET IMPROVEMENT—

Richmond Standard Macadam, 428,258.44 sq. ft., 2.355 miles.

Bitulithic Paving, 1,050,938.49 sq. ft., 3.631 miles.

Sidewalks, 323,884.59 sq. ft., 12.268 miles.

Gutter, 124,120.04 sq. ft.
 Open Drain, 865.68 sq. ft.
 Curb, 65,874.97 lin. ft., 12.476 miles
 7"x30" corr. iron culverts, 88.00 lin. ft.
 5"x30" corr. iron culverts, 1,710.10 lin. ft.
 10" corr. iron pipe, 2,596.70 lin. ft.
 8" corr. iron pipe, 1,031.40 lin. ft.
 8" iron pipe, 347.90 lin. ft.
 Header, 15,493.76 lin. ft., 2.934 miles.
 Cut, 76,949.08 cu. yds.
 Fill, 17,870.41 cu. yds.

SEWER IMPROVEMENT—

30" sewer pipe, 2,117.00 lin. ft., .400 miles.
 24" sewer pipe, 7,635.00 lin. ft., 1.446 miles.
 21" sewer pipe, 831.00 lin. ft., .015 miles.
 14" sewer pipe, 2,596.00 lin. ft., .491 miles.
 12" sewer pipe, 4,806.12 lin. ft., .910 miles.
 10" sewer pipe, 1,702.59 lin. ft., .322 miles.
 8" sewer pipe, 10,095.89 lin. ft., 1.912 miles.
 4" sewer pipe, 1,394.00 lin. ft., .264 miles.
 Manholes, 144.
 Lampholes, 113.
 Wyes, 4,658.
 Fill, 16,910 cu. yds.
 Total of 14.409 miles of sewer.

RIVERSIDE.

Reduced to road miles, street improvements for the fiscal year 1914-15 comprise the following:

Meadam roadway.....	2.07
Combination curb and gutter.....	.18
Standard gutter.....	.22
Standard curb.....	.53
Cement sidewalk.....	2.33
Culverts.....	.31
Sewers.....	.56

Work is under way on an outfall sewer to serve the southwestern part of the city, involving an expenditure from city funds of approximately \$7,000.00. This work will require 5,500 feet of 16-inch pipe and 3,600 feet of 14-inch. The section of the city known as Arlington will later form a district to install a sewer system to connect with this outfall,

which is of a capacity sufficient to care for other sections as the municipality develops.

Work completed and proceedings inaugurated for ornamental street lighting exceeds the totals for all previous years. There were installed 62 single-light concrete posts and 91 three-light concrete posts of the mission type adopted for the business district and main thoroughfares. Proceedings were commenced and the contract has now been let for the installation of 444 single-light concrete posts in the eastern portion of the city. This installation will light about 35 blocks. The work of this character started and completed during the year represents an expenditure on the part of property owners of more than \$19,000.00.

Important movements looking to the extension and beautification of the city's park system were inaugurated during the year, and have resulted in the acquisition of the Santa Fe Railway Company's Indian village exhibit at the Panama-Pacific Exposition. This will be placed on an eminence in Fairmount Park.

The city and the Santa Fe Railway Company have closed contracts for the purchase of a block of land lying between the Santa Fe and Salt Lake railroad depots to be used for park purposes, and on this site the Santa Fe Company will erect a handsome new depot, as a direct result of the city's co-operation.

F. C. C. CREO, City Clerk.

ROSEVILLE.

The year 1915 has seen great improvements in our city. We have completed about 1½ miles of concrete highway through the heart of the city; we own our own sewer system and electric light plant. We are increasing our light plant right along. It is now twice the size of the original, is entirely on the meter system, having over 600 in use at the

present time. Our new high school is ready for occupancy, erected at a cost of \$40,000, and is a credit to the district.

Our city is flourishing.

F. H. EVANS, Clerk.

SACRAMENTO.

I enclose Progress Report of notable improvements made in the City of Sacramento from January 1st, 1915, to December 15, 1915:

Yours very truly,

M. J. DESMOND, City Clerk.

BUILDING CONSTRUCTION AND REPAIRS.

Permits	Class of Construction	Amount
154	Dwellings.....	\$436,617.00
611	Alterations to dwellings..	177,193.00
56	New business buildings..	371,036.00
371	Alterations to business buildings.....	186,069.00
5	New public buildings....	38,569.00
14	Alterations to public buildings.....	32,425.00
		\$1,241,909.00

In addition we have received a bid in the sum of \$197,426.00 for the erection of Hall of Justice building, and bid of \$18,624.00 for jail equipment for new Hall of Justice building, which bids are now being considered by City Commission.

STREET CONSTRUCTION UNDER VROOMAN ACT.

32,582 lin. ft. curb and gutter combined at 60c per lin. ft.	\$19,549.20
2,479 lin. ft. gutter alone at 30c per lin. ft.....	743.70
2,179 lin. ft. curb alone at 30c per lin. ft.....	653.70
30,466 lin. ft. of domestic and storm sewer, ranging from 26" to 6" diameter at \$1.25 per lin. ft. (average).....	38,082.50
99 manholes at \$40.00 each..	3,960.00
158 gutter drains at \$6.00 each	948.00
123,000 sq. ft. concrete sidewalk at 11c per sq. ft.....	13,530.55
1,798,774 sq. ft. asphalt on concrete base at 15c per sq. ft.....	269,816.10
	\$347,283.75

CONTRACT WORK PERFORMED.

Resurfacing "J" Street from Front to Twelfth Streets..	\$12,501.89
Furnishing and installing Chlorine Apparatus.....	2,948.00
Furnishing Machinery for Machine Shop.....	1,150.00
Constructing addition to Oak Park Fire Station.....	7,808.00
Constructing addition to City Wharf, Front and "P" St.	4,635.00
Constructing bridge across Arcade Creek in Del Paso Park.....	2,790.00
Improving the intersection of 6th and "M" Streets.....	900.00
Improving 15th Street from "P" to "Q" Streets.....	2,050.78
Addition to City Wharf Shed, Front, "O" and "P" Sts..	3,176.00
Levee Revetment on Sutterville Levee.....	11,250.00

WATER DEPARTMENT.

Early in the summer the Schaw-Batcher Co. Pipe Works entered into a contract with the city to install a new system of water mains in the recently annexed territory and reinforce those in the old city. Their contract covered a total of about 85 miles of mains varying in size from 4 inches to 36 inches. Cast iron was used between the sizes of 4 and 16 inches inclusive, and riveted steel in the 4 sizes of 20, 24, 30 and 36 inch. About 80% of these mains are now laid. A contract for a new pump to be placed in the old City Water Works will soon be let. This pump is to supply between 15 and 20 million gallons per 24 hours. The following quantities of pipes have been laid:

	Miles
4 inch.....	3.32
6 ".....	35.10
8 ".....	15.72
10 ".....	2.74
12 ".....	6.00
14 ".....	1.84
16 ".....	2.10
20 ".....	2.29
24 ".....	1.89
	71.00

The work will be completed by April. In addition the employees of the department have laid 7.10 miles of new pipe.

NEW SEWERS.

During the year 1915 Sacramento has constructed 13.25 miles of sewers under its bond issue of \$1,032,000.00.

In connection with the main sewers the following additional work was completed:

A reinforced concrete pumping station including equipment of three 40,000,000 and two 12,000,000 gallon motor driven pumps, a reinforced concrete transformer house and an outfall sewer.

The original plan to purify the sewage by means of Imhoff tanks was abandoned on account of the extremely high cost due to the water table lying close to the surface at this point. The City Engineer presented a plan to the State Board of Health providing for screening the sewage. Under this plan, which was approved by the State Board of Health, the sewage will be conducted through mechanically operated $\frac{1}{2}$ -inch screens. The sewage will then be pumped directly into the Sacramento River, discharging below the surface of the water.

The pumping equipment at Sewage Pumping Station No. 2 includes three 40,000,000 gallon pumps, and two 12,000,000 gallon pumps, with provision for adding three 40,000,000 pumps when required.

SAN BRUNO.

This city has been incorporated for just one year, and considering its brief period of existence its activity has been remarkable.

At the present time about five miles of concrete sidewalks, gutters and curbs have been laid. Eight reinforced concrete bridges have been built and a reinforced concrete storm sewer has been

constructed along one of the main streets for about 1,300 feet. The Board is about to lay and construct over ten miles of sanitary sewer which will complete the sewer system of the city. Proceedings are well under way for over a mile of additional sidewalks, gutters and curbs and another reinforced concrete bridge.

The water problem, being one of the largest and most important of solution with which the city is confronted, has been put in the hands of a permanent committee of which the City Engineer is a member. The question is being dealt with from all angles.

Through the efforts of the Board of Trustees the Southern Pacific Company have authorized the construction of a much needed new railroad station. Plans have been submitted and approved by the Board, and the work of preparing the site is rapidly progressing.

The newly appointed City Planning Commission will give proper attention to tree planting and other matters of beautification, and various smaller matters in the way of drainage and street repairs have been cared for out of the general fund without any extra expense to the taxpayers.

SAN DIEGO.

Undoubtedly the greatest single achievement of the city of San Diego during the past year has been the successful holding of the Panama-California Exposition, starting on New Year's Day and being kept open continuously for twelve months, thus establishing a new record in the matter of expositions. To further emphasize the success of this undertaking has come the official announcement that the exposition, augmented by many of the most important foreign exhibits from San Francisco, will be continued throughout 1916.

The year 1915 has seen the completion of harbor improvements, authorized by bond elections and aggregating in cost \$1,400,000.00. These include the construction of a pier and bulkhead and the dredging of a large area to accommodate deep draught shipping. The dredged material has been deposited back of the bulkhead, and the land thus reclaimed is being rapidly leased to fish packing and other industrial projects of large importance to the community. The completed work, however, is but the beginning of harbor development which is under contemplation.

Another big accomplishment has been the completion and opening of a municipal stadium, costing some \$200,000.00, and seating over 30,000 people. It has been declared one of the best in the country.

Then, too, there has been opened to the public a playground, the gift of Miss Ellen B. Scripps, which cost, for site, construction and equipment, about \$180,000.00.

A signal change has been made in the matter of municipal government, through an amendment to the charter, whereby practically all of the administrative work of the municipality is placed under a manager of operation, chosen by the Common Council. Under his supervision come water, sewers, harbor, streets, engineering, city farm, and building, gas and electrical inspection. Fred M. Lockwood, the incumbent, receives a salary of \$6,000.00. It is believed that the first annual report under the manager plan will show a large saving to the city in the cost of administration.

ALLEN H. WRIGHT, City Clerk.

SAN GABRIEL.

In regard to improvements for the year, we have constructed three bridges, concrete, one concrete culvert, and assisted in the construction of the second

concrete culvert and fill of more than six hundred feet in length at a cost of \$35,000.00 in round numbers, and have put in sidewalk, curb, ornamental lights and street work to the amount of about \$12,500.00.

Just entering into a contract today for the construction of 6,000 feet of 4½ inch oil macadam, two strips of 20 foot width each and the curbing on the outside, the inside curbs are now constructed, the cost to be \$18,000.00.

IRA H. STOUTER, City Clerk.

SAN JOSE.

The most noteworthy advance in affairs municipal in the City of San Jose during the past year has been the adoption of a new charter, which will become effective July 1st next. Radical changes from the existing system have been made. The office of mayor is completely abolished, and the "Business Manager Plan" substituted. Under the new scheme there will be elected seven councilmen-at-large, with power to pass necessary ordinances, etc., and provide revenue. The council select a business manager, deposable by them at any time, who takes control of the city business, and is invested with the disbursing power, under a system of checks, and balances of prerogative. The plan contemplates a business manager handling the city affairs much as would a manager of a private corporation. An auditor, as a check on the manager, and a police judge, are the only other elective officers.

In matters of physical progress, San Jose has completed during the past year, an aqueduct or by-pass, draining the flood waters of the Canoas District south of the city, so that, according to the engineers in charge, the danger of floods is entirely removed. Floods such as have occurred in the past are now declared to be impossible.

The work of motorizing the apparatus of the Fire Department has been completed. The last horse-drawn equipment, consisting of three pieces, was discarded in November, and motors substituted. The department has been completely reorganized, resulting in vastly increased efficiency.

The School Department has erected necessary new buildings, enlarged along certain lines of curriculum, and has completed installation in several new playgrounds. An athletic field, comprising an entire block, has been added to the department equipment in this line.

A large amount of street paving has been completed during the year, and the program for the next year contemplates several miles of additional pavement.

ROY E. WALTER, City Clerk.

SAN JUAN.

In regard to what San Juan is doing, I would state that we have let the contract for improving Third and parts of Monterey and First Streets with a concrete base pavement, thus filling in one of the gaps of the State Highway on the Coast route.

Next spring we intend to pave four blocks in the business district from curb to curb.

GEO. E. ABBE,
Pres. Board of Trustees.

SAN MARINO.

The only progress report I have to make is that we maintain our twenty-three miles of highways in an exceedingly high-class condition.

Respectfully yours,
W. B. REES, Clerk.

SANTA BARBARA.

The following is a progress report of this city:

A special tax of \$150,000 was voted by the people of this city to repair storm damage and build a sea wall.

Contract for the sea wall was let August, 1914, and completed in 1915, contract price \$57,973.11.

Three new bridges and four bridge decks were completed, amounting to \$44,553.75. A fourth bridge is now in the course of construction, contract price \$18,973. A concrete walk was laid along the west boulevard which cost \$6,104.74. The above were all paid out of the special tax.

From the general fund we have just let the contract for the construction of a timber bulkhead along the ocean on the East Boulevard, amounting to \$5,984.

Pergola on the west beach for picnic parties, etc., \$793.

Bids were opened December 2nd for fire equipment consisting of a motor propelled combination hose and chemical wagon, 1,100 feet fire hose, nozzles and life net, which will cost in the neighborhood of \$7,000.

Under the Vrooman and Improvement Act of 1911 about four and one-half miles of pavement was laid. Contracts awarded for paving, \$136,811.18; assessment sheets for paving issued, \$180,286 for the year, to date. About ten miles of sewer was laid. Contracts awarded for sewers, \$24,590.00. Assessment sheets for sewers issued to date, \$7,898.64. Contracts awarded for grading, curbing and guttering, \$6,164.80. Assessment sheets issued for grading, curbing and guttering, \$1,918.33. Storm drain contract awarded and assessment sheet issued for \$10,805.73.

This paving completes the main arteries into and through the city and is a permanent construction with a concrete base of four to six inches with a two inch asphalt wearing surface.

A. CHRISTINE HOLMBERG, City Clerk.

SANTA MONICA.

The following are the notable improvements and achievements accomplished in Santa Monica the past year:

Completion of High School, cost \$250,000.00.

Municipal tennis courts, four in number.

Completion of Linda Vista Park, three miles on Palisades overlooking Pacific Ocean.

Changing to Commission form of government.

Location of Malibu Motion Picture Co.

Building permits, \$276,241.00.

Completion of Pico Boulevard, making a new and shorter route to Los Angeles.

Installation of Bertillion and Finger Print system of detection, probably the smallest city in this country using it.

Bundy bath house, only one at north side of city.

Yours very truly,

C. B. KEARSLEY,

Secretary Chamber of Commerce.

ST. HELENA.

During the year 1915 the Town of St. Helena has made public improvements as follows:

Constructed about 5,000 square feet of cement sidewalk, about 6,000 linear feet of concrete curb, about 1,000 linear feet of 6 inch sanitary sewer, about 2,000 linear feet of 24 inch storm sewer; also extended Stockton Avenue and widened Fulton Lane.

OTTO BEHRNS, Town Clerk.

SUTTER CREEK.

During 1915 this city has installed a rock crushing plant, rockbreaker operated by electricity. Rock bins at roadside. Large quantities of broken rock placed on streets have put them into better condition than for many years past. Have also built one concrete bridge and beginning work on another.

SUNNYVALE.

The Town of Sunnyvale has completed the sewer system and the water works plant and distribution system. The amount of the bond issue voted for this purpose was \$40,000.00 for the sewer and \$35,000.00 for the water plant.

One block of paving and considerable grading, graveling and repair of streets has been done this fall.

The town jail was built, also an addition made to the fire house.

IDA TRUBSCHENCK, Town Clerk.

TEHACHAPI.

Our little town (one of the smallest incorporated towns in the state) has just completed a municipal electric lighting and power system, with cast iron ornamental electroliers which would be a credit to the large cities. The cost was about \$10,000.00.

FRED SNYDER, JR., Town Clerk.

VALLEJO.

The following is a concise statement of the public improvements made in Vallejo during the year 1915:

Waterfront improvements consisting of 1.2 miles of timber bulkhead and the partial reclamation of 100 acres of waterfront land completed at cost of \$150,000.

Construction of 3,000 lineal feet of permanent street pavement consisting of 4 inch concrete base and 2 inch bituminous surface, average width 45 feet.

The greatest achievement of the year was the securing of the award for the construction of a \$7,500,000 battleship at the Mare Island Navy Yard, thereby insuring an immediate increase of population and corresponding prosperity for labor and citizens.

T. D. KILKENNY, City Engineer.

VENICE.

The following are all the notable improvements made and achievements accomplished during the past year:

Extended outfall sewer on the bed of the ocean 750 feet.

Completed Center Street pier at cost of \$9,000.00.

Built a comfort station on Navy Avenue pier, cost \$3,500.00.

Purchased a combination ambulance and police patrol automobile.

Built an emergency hospital and installed municipal nurse.

Built a jail at the city yards.

Bought an American La France auto fire engine.

Entered into a contract for the disposal and collection of all garbage, effecting a saving of about \$7,000.00 a year over the former cost.

Completed about three miles of Warrenton asphalt concrete pavement.

C. S. THATCHER, City Clerk.

WHITTIER.

Whittier takes pride in the upkeep of her streets, parks and playgrounds. A steam road roller is kept working constantly for the greater portion of the year rooting up and rolling down the streets needing repairs, the greater number being paved with gravel and oil.

We have a Park Commissioner who is an enthusiast for parks and playgrounds, and works in conjunction with the Community Y. M. C. A. (of which more will be said later) in beautifying the city and caring for the young man and old men who are not in some wise employed. Central Park stands near the center of town and has a great amount of shade and is fitted with picnic tables and benches, swings, etc. Alta Park is in the making but is also fitted with tables, croquet grounds, etc., and commands a grand view toward the ocean and the City of Los Angeles. Loftus Park, also in the making, is provided with two cement tennis courts, croquet grounds, etc. And a rather unique playground is that which occupies a vacant lot near

the center of the business portion of town, provided with croquet grounds, etc., where old men who have retired from active life may spend as much time as they desire, and across the street is a similar one for boys and young men.

The city's Fire Department consists of one Seagrave combination chemical and hose motor truck, lately purchased at a cost of \$6,000.00. This carries, beside the chemical engine, 1,500 feet of 2½ inch hose and 300 feet of 1½ inch hose.

Building for the past season has fallen behind that of other years, as has been the case in many cities. For the present year the valuations have been \$115,-355.00. There were business houses valued at \$27,000.00, one church at \$8,000.00, and one school house at \$23,000.00, these with other and smaller buildings making up the total.

Whittier owns her water source and system, valued at about \$203,000.00. The water is at present pumped by steam, the greatest lift being 458 feet. There are 1,942 connections, with 475 of these metered. The daily pumping capacity is 50,000 cubic feet. The flat domestic rate is \$1.00 per month, meter rates are .03 and .03½ per 100 cubic feet, according to the elevation of the reservoir from which served.

The Whittier Chamber of Commerce has accomplished some important matters, among them that of securing the construction of a scenic mountain drive from Whittier up through Turnbull Canyon and over the Puente hills to the Pomona Valley.

The Chamber has also secured natural gas for the city, which is now being piped from the oil wells.

CLARENCE O. TRUEBLOOD,

City Clerk.

YREKA.

Yreka can report the paving of Main Street, the route of the State Highway through this city; the purchase of a

\$1,750.00 street power flusher; the purchase of a new Worthington pump of 500 gallons a minute capacity and 750 feet of fire hose; also the completion of the \$8,000 Carnegie Library. A new city hall, camping grounds for auto tourists and a park is now being considered.

Filter beds at the septic tank site was also an important improvement.

U. F. BROWN, City Clerk.

Should it have been possible that other reports have been sent and not published herewith, attention called to the omission will be most kindly received. Such reports and any others that may be received will be published next month.—
EDITOR.

Mention "Pacific Municipalities" when writing to advertisers.

NEW YORK WORLD'S LARGEST CITY.

New York is the largest city in the world. London, by reason of the losses occasioned by the war and because of a gigantic mistake in estimating the population, must now admit that the American metropolis is the bigger by about a quarter of a million persons.

Nor are matters improved, as Londoners have imagined, by comparing the population of Greater London with that of Greater New York, for there again the American metropolis beats the older city by 132,000. It is four years now since the last census of London was taken, but the official figures have only just been made public.

The exact number of people in the county of London, according to these 1911 figures, is 4,521,358, whereas New York City in 1910 numbered 4,766,883.

WE ARE IN THE MARKET FOR MUNICIPAL BONDS

ALSO FOR IMPROVEMENT BONDS ISSUED
UNDER THE NEW CALIFORNIA

"Improvement Bond Act of 1915"

LUMBERMENS TRUST COMPANY

OF PORTLAND, OREGON

CAPITAL AND SURPLUS \$600,000

GILBERT W. SMITH,
Manager San Francisco Office

511 Insurance Exchange Bldg.
SAN FRANCISCO, CAL.

CORRESPONDENCE SOLICITED

Mention "Pacific Municipalities" when writing for catalogs.

GROUND WATER SUPPLIES AND WELLS

By ARTHUR L. COLLINS, Consulting Engineer, San Francisco

A large amount of money has been wasted in the construction and operation of wells and pumping plants and will continue to be wasted until the necessity is demanded for making a systematic study of all the features relating to the underground water supplies.

The public as a whole does not seem to care how much a water supply costs provided it is within certain limits and so long as it is sufficient for the present needs. The water supply is more often made a political issue. The office holder will go into power pledged to provide a wholesome and adequate water supply. The problem of getting water from wells is such a simple problem as may appear from the reports of the land promoters that the candidate may even imagine himself an authority on the subject. John Jones has a couple of acres of land out near the city limits upon which he has a domestic well. Water is there because John has enough for the house and waters a few stock. The next logical step is to option the land, contract with the most reliable driller to prospect for water. Now this driller knows there is plenty of water there because he has been drilling wells in this county for upwards of twenty years. Likewise, when more water is wanted or something goes wrong with the old well a new hole is ordered and its location more than likely is about 30 feet away.

Experience is teaching the necessity for more scientific methods and plans than can be devised by the person unskilled in underground water problems.

The first unusually dry year preceded by a series of wet years will always find several of the well settled communities in serious difficulties with regard to their water supply. Only with the proper forethought and plans definitely settled in advance can the expenditures be made to the best possible advantage.

The underground water sources should be looked upon as reservoirs, as pointed out by the writer at various times in this organ and others. The value and advantage of this source for storage has also been given. As time goes on surface supplies in excess of the normal usage, coming at the rainy season of the year, will be put back into the ground to be used at a later date and in this manner defer expenses otherwise considered necessary.

In addition, it can also be shown how an auxiliary supply of a gravity system as furnished by streams and springs is the means of making various economies in the ordinary daily operations.

The underground water sources in this state are spoken of as reservoirs because it is of the greatest importance that the public in general should learn to consider the water coming from the ground as easily exhaustible, although there may be exceptions to this rule.

The construction of an irrigation plant in the vicinity of the municipal plant is a great menace to the already constructed plant than is generally appreciated although the installations may be several thousand feet apart.

The municipal supply should be protected both legally and with the proper

mechanical construction to prevent future interferences.

The obtaining of water from the ground is bound up with perplexities. First, the structure of the ground must be favorable for the retaining of the waters; next, the water must have found its way into the specially suited ground and be of pure and wholesome quality. Then the human element enters, the well driller and pumping plant designer must get the water out of the ground; to them is intrusted the problems relating to economy. At the present time it is not difficult to find water, but the quantity and quality for the money expended is the important problem.

The work of the ground water engineer will include the problems involving the interferences of water rights, the same as surface rights in addition to the problems involving the economical construction and operation of wells.

Ground water sources may be looked upon as serving two purposes. They may be considered as a reservoir, filled with water, with practically no inlet for new water, or they may be looked upon as a lake, where a certain amount is entering with practically the same amount leaving. The safe draw-down in the latter case is determined by the amount replenished each year or series of years.

The study of the operation of a well already in existence is the best means of determining the value of a ground water supply. Give the engineer an opportunity to install accurate and sensitive gages and recording devices and the actions of the wells will tell their own story. These records are as important to ground water studies as the rain gages and run off gages are in determining the discharge of a stream. There is continuous litigation over the division of surface water supplies, but there has been very little trouble, comparatively, over ground water supplies. This is due, no doubt,

to the small amount of reliable data on the subject as possessed by the injured parties, or the possibility that they do not know that they have been deprived of water to which they have had a prior right.

The economy in a pumping plant will depend in part on the well casing and the method in which the well has been constructed. A new method of arranging the well casing has recently been developed which is considered an important improvement.

The ordinary well casing with the slit perforations are generally inefficient. However, it is a very common occurrence to find wells giving say 700 gallons a minute from 15 feet of water bearing sands. The draw-down is generally from 20 to 25 feet.

If the engineer will make a comparison of the different operating wells, estimate the area of the openings into the casing, he will find it impossible to put a value on the efficiency of the operation of the casing. This is no doubt due to the fact that some of the openings near the top of the sand stratum are entirely free from any obstruction, while lower down, the slits are banked up with sand. This condition is proven by the rule as observed by the writer,—that unless a certain amount of sand can break away with the first water that comes out of the well, the well will be of very small capacity.

It is now being demonstrated, under a patented system, that a well constructed by changing the size of the casing at each sand stratum and permitting the water to rise vertically between the two casings and eliminating the strainer or perforations entirely, gives the maximum yield and eliminates the sand troubles.

This is due to the fact that clay beds located 50 feet or more below the surface are capable of supporting themselves when a small amount of sand is taken from beneath them. The small

slits are a hindrance to the passage of the water through the casing. The spaces located near the bottom of the sand stratum permits the sand to slide into the well by its own weight, and in that manner too much sand is removed and the roof must break down.

It is found that with the new method the supply may even be doubled and the draw-down reduced to half.

It is also becoming quite common to reconstruct old wells under this same system, placing the smaller size casing within the old casing. The well is cheaper than the ordinary perforated well.

In wells in which there is no clay roof and where the only feasible method is to provide the maximum seepage area through the casing, it is becoming quite the common practice to construct a double well with one casing within the other, and fill the space between with gravel.

In localities where this method has been tried and the wells have been in operation for a length of time it has been found that there is a gradual filling up of the strainer medium. Wells of this character should be provided with either short inner sections, which can be taken out at will or in case of the gravel filling, have provided a mechanical agitator.

LEAGUE OF WASHINGTON MUNICIPALITIES.

At the Sixth Annual Convention of the League of Washington Municipalities, held at North Yakima from October 6th to 8th, 1915, inclusive, the leading feature was an extended discussion of public utilities, each party to the controversy being represented by some of its ablest men.

Other important timely discussions which engaged the attention of the convention dealt with the reorganization of

public health work in the state of Washington, public milk and water supplies, the managerial form of municipal government, and university training for public service.

The report of the League's committee on public utilities includes a proposed legislative bill relating to powers of municipalities with reference to public utilities, which received the endorsement of the convention in substantially its present form, and which is to be submitted to the voters of the state as an initiative measure at the next election. The convention also instructed the same committee to draw up, before next January, a bill giving to the cities and towns of the state a larger measure of home rule in local municipal affairs.

Other legislative work mapped out for committees of the League includes:—

(1) A bill providing optional forms of government for cities other than first-class.

(2) Preparing suitable legislation extending the principle of the merit system to state, county and city positions.

(3) Co-operating with the state commissioner of health in the preparation of a revised public health code for the state.

One of the resolutions adopted by the convention calls for the appointment of a committee to work out a proposal for a city planning conference in connection with the work of the League, and another resolution relates to the League's co-operation with the Utility Bureau established by the conference of American mayors.

The proceedings of the convention will be published within a few weeks.

The following officers were elected: President—Leonard O. Meigs, City Attorney, North Yakima; Vice-president—W. H. L. Ford, City Treasurer, Everett; Secretary-Treasurer—Herman A. Brauer, University of Washington, Seattle.

INFRINGEMENT ON PATENT CLAIMED.

Odorless Sewer System Involved.

(From the "Sacramento Bee")

Notices received by hundreds of property owners in the annexed district that the sewer systems and cess pools installed in their property in the past eight years infringed on a patent obtained by James Schofield and that difficulty and Court actions could be avoided by sending \$25 to the law firm of Webster, Webster & Blewett of Stockton, have caused considerable speculation.

The notice sent by the Stockton lawyers came as a surprise, as many of the owners have been using the sewers connected with their houses for years, in many cases having bought their homes with the sewers already installed.

CLAIM WON'T HOLD, SAYS YELL.

City Attorney Yell does not believe the claim that the property owners in the annexed district are infringing upon his patent will hold in Court. A year ago Yell received a communication from Schofield claiming that the schools in the annexed district were using septic tanks upon which he held a patent, and demanding a settlement by the city. Yell investigated the matter and notified the claimant that he could not recognize the alleged patent and to go ahead and sue. No word has been heard from Schofield yet.

In his investigation of the matter Yell found that the tanks have been used several years prior to Schofield's alleged patent. This, he claims, invalidates any patent that may have been issued at a later date. He also says that he received information at the time that the idea of the sewage disposal system emanated from the State Engineer's office, and it is his belief Schofield has patented the same idea.

HOLD 2,000 CLAIMS.

"We hold claims against approximately 2,000 residents of Sacramento for infringement of patents obtained September 7, 1909, for the 'Odorless Sewer System,'" said Percy S. Webster, of the firm of Webster, Webster & Blewett, patent and general attorneys, when questioned in Stockton today relative to letters sent numerous Sacramento residents requesting settlement for the alleged infringements.

FOUND LETTERS SENT.

A sample of the letters sent out follows: Stockton, Cal., December 24, 1915.

Dear Sir:—It has been called to our attention that you have installed on your premises and are using a sewer system which is a direct infringement upon the patent of our client, Mr. James M. Schofield, which patent is for "Odorless Sewer System," dated September 7, 1909, and No. 933,121.

This is to advise you that Mr. Schofield will require that you make settlement for the use of this sewer system and the infringement of said patent.

If you desire to settle at once without the matter being referred to the Courts, he has a special license charge of twenty-five dollars, which he is willing to accept and give you full license to use same. If we are compelled to resort to the Courts to force a settlement, we will, of course, ask for greater damages.

Trusting you will take the matter up at once and make adjustment, we are,

Very sincerely yours,

WEBSTER, WEBSTER & BLEWETT.

By Percy S. Webster.

GOES BACK TWO YEARS.

Some of the Sacramentans who have received these letters installed the systems two years before the date of the issuance of the patent, September 7, 1909. When apprised of this fact, Webster stated the patent laws protect

the person granted a patent for two years prior to the date of application. The Schofield patent was applied for several months prior to the date of issuance of the patent.

"If any of the Sacramento people can prove they installed a sewer system similar to the Schofield system two years prior to the time Schofield applied for a patent, the claims are defeated," declared Webster.

DESCRIPTION OF SYSTEM.

Webster described the Schofield system as consisting of a cesspool with vertical and horizontal wells bored around it. The solid mater is deposited in the cesspool, and the water is drained off through wells, thus preventing an odor reaching the surface.

"Our firm has claims against several thousand people in the Sacramento and

San Joaquin Valleys for infringements," says Webster. One hundred and fifty settlements have been obtained. These have been made in nearly all cases after attorneys have been consulted.

SAYS RAILROAD PAID.

"The Southern Pacific Railroad paid \$250 after installing a system at Tracy. This was a poor job and Schofield claimed that the reputation of the patent was damaged thereby.

"The firm of Clark & Henery paid a large sum for infringements for installing a large number of cesspools in Bours Park, Stockton. It was through this firm that it became known that many systems had been installed in Sacramento. Engineer Day of Sacramento installed many in Sacramento for a period of two years."

NOTES AND COMMENT

Nearly ever city that operates a septic tank has received notice to pay a royalty to the Cameron Company. Numerous communications have been received at the League Headquarters asking advice as to the course to pursue in this matter. In reply the following has been issued:

Mr. Fred W. McConnell,
City Attorney,
Healdsburg, Cal.

Dear Sir:

Your letter of Dec. 16 informing us that the Board of Trustees of the City of Healdsburg desires us to cooperate with you in contesting the claims of the Cameron Septic Tank Company, duly received.

In reply thereto, will say that so far as we know the Cameron Company has not filed suit against any city or town in this state; the recent activities appear to consist of threats only. We understand, however, that they are now claiming royalties on the installation of

the Imhoff Tank as well as on ordinary septic tanks. Should the company file an action against any city or town in California, we will get busy at once and ask the President of the League to appoint a special committee of attorneys to look after the case.

The Cameron Company exhibited a lot of activity about three years ago and sent letters out at that time all over California demanding royalties. The League took up the fight immediately and appointed a committee of attorneys to look after the case, but the company quickly abandoned the contest. The renewed activities displayed recently are probably due to a recent decision apparently favoring the company to some extent.

We have tried several times to get the company to deal directly with the League, assuring its representative that if we were convinced of the justice of its claims, the League would advise the cities to pay the royalty, providing the

demands were not unreasonable, but for some reason they have declined to take the matter up with us in this way. In the meantime, we suggest that you notify the company of your refusal to recognize its claims to any royalty whatever.

Yours very truly,
LEAGUE OF CALIFORNIA
MUNICIPALITIES.

It may be stated that there has been no material change in the laws governing municipal elections and that the elections in sixth class cities to be held next April will be conducted the same as heretofore. It will not be necessary to advertise for election officers as provided in Section 1151 of the Political Code. However, a circular setting forth the procedure to be followed, is now in preparation and will be mailed to city clerks in time to be of use at the coming elections.

The president of the State Railroad Commission in a published statement, has declared flatly in favor of all municipalities owning their water supplies. Coming from a source that has an abundant opportunity for comparing the relative service rendered by private water companies and by the municipalities, the statement has more than passing significance. To all impartial observers no facts are more fully brought out than those resulting from the municipal and private operation of water systems, and the conclusions resulting from the facts are that the municipal service is superior in every respect except possibly that of profit-earning. Municipal service more nearly fulfills sanitary requirements and demands for fire prevention than does the private service. Moreover, rates are lower and the use of water for public parks, and parking spaces, for street sprinkling and sewer flushing is stimulated by municipal ownership. Presi-

dent Thelan's advice to cities to own their water supply is timely in this, the Railroad Commission may fix a valuation on private plants which the municipality may desire to purchase, and it would be wise for municipalities to acquire their own supplies while the Railroad Commission is so constituted as to deal fairly with all parties concerned. Some time, it may be, the Railroad Commission will be composed of men with different interests to serve rather than those of the public. Now is the time for municipalities to acquire water supplies.

PREFERENTIAL VOTING AT SANTA MONICA.

(Reported by F. P. Lee, Manager
"Bay Outlook.")

The first election under the Bucklin form of Preferential Ballot was held on December 7, 1915, and it can be stated to have been quite a success in every way. There was a good deal of opposition to the new ballot at the commencement of the campaign, but extensive publicity was carried on in the Santa Monica "Bay Outlook," educating the public as to the ballot, and the electors were certainly well informed as to how they should use the form of ballot in question.

The results show that the second and third choices were availed of in gratifying respect. The ballot also shows that the Commissioner of Public Safety who was elected, S. L. Berkeley, clearly represented the wishes of the majority of the electors. Dudley, who was the incumbent as Mayor, obtained third position in the final count. He was defeated owing to a variety of reasons, though he was the strongest candidate before the public at this election in every way. It may be that his own personality defeated him, as the public seemed to be in the mood for making a change of administration in the City Hall so that the Commission form of government should have a start with an entirely new set of officials.

Single shotting had a good deal to do with Dudley's defeat. Berkeley, who

was elected, increased his strength by second and third choices by 49%; Steele, who was second, increased his strength by 14%. It is to be observed that the difference between Dudley and Berkeley on first choices was only 12 votes in Berkeley's favor. The Commissioner of Public Works, Carter, was elected by first choice only, he having received a majority of the votes cast, and he undoubtedly was the strongest candidate for the position. For the position of Commissioner of Finance, the election resulted in Barretto, who was the City Treasurer in the former administration, being declared elected by a plurality of only five votes over the second opponent, Mr. Whelan. The election was contested before the Superior Court in Los Angeles, and resulted in the recount suit being dismissed and Barretto declared elected by 19 votes.

With regard to the election in general, mention is made of the position as affecting the candidate J. W. Armstrong, who ran for Commissioner of Finance. Armstrong was induced by the "Outlook" to apply as a business man for a business position, and absolutely refused to make any political campaign at all, other than a personal letter containing a copy of his platform, which he sent to about 50% of the voters. He made no effort at all to be elected. He attended no public meetings, and solicited no votes; had no workers, and no automobiles on election day.

The method of Mr. Armstrong's campaign induced people to say that he had no show whatever, but it clearly indicates that such a course may be pursued in the future with excellent results and it may mark a new era in campaigning under the Commission form of government.

In the election of Commissioner of Public Safety, it was necessary to take in all choices, as was the case in Finance and for certain members of the Board of Education.

The Preferential Ballot would seem to be here to stay and now that the electors have used it, they would seem to prefer it to the old system. The lessons obtained from it are valuable, and the election must surely stand as a record for the manner in which the second and other choices were used with regard to the total of these choices to the number

of ballots cast. The following is the returns of the election:

COMMISSIONER OF PUBLIC SAFETY.

	First Choice	Second Choice	Other Choice	Total
Berkley.....	1022	394	90	1506
Brown.....	87	63	87	237
Butzer.....	720	271	86	1077
Dudley.....	1006	111	39	1156
England.....	260	142	87	489
Girard.....	29	63	63	155
Steele.....	840	427	115	1382

COMMISSIONER OF PUBLIC WORKS.

Carter.....	2398	265	37	2700
Hollwedel.....	1179	328	32	1539
James.....	83	206	88	377
Smith.....	255	147	84	486

COMMISSIONER OF FINANCE.

Armstrong.....	757	239	50	1046
Barretto.....	1190	181	37	1408
Fogel.....	244	158	53	455
Fuller.....	170	61	21	252
Griffitts.....	352	172	67	591
Snyder.....	292	113	69	474
Stewart.....	71	90	45	206
Whelan.....	1043	269	90	1402

BOARD OF EDUCATION—FOUR YEAR TERM.

Dresher.....	1847	Sanders.....	1354
Hamblen.....	1232	Welch.....	1406
Reed.....	2110	White.....	1608

BOARD OF EDUCATION—TWO YEAR TERM.

A. M. Montgom- ery.....	1354	88	105	1547
Fogel.....	1199	99	30	1328
Jenkins.....	381	78	33	492
F. S. Montgom- ery.....	890	160	44	1094
Seymour.....	602	201	38	841
Uhl.....	842	195	58	1095
Williams.....	839	298	47	1184

POLICE JUDGE.

Ettien.....	1050	157		1207
King.....	1755	207		1962
Weil.....	697	235		932
Storm Drains.....			Yes	No
			1574	1394

Francis J. Heney has been appointed City Attorney of Santa Monica. With Mr. Heney's experience in convicting municipal grafters it is safe to assume that Santa Monica is to be immune from charges of graft—for awhile at least. It will be a pretty nervy sort of person who will try to put over some quiet little scheme with Mr. Heney on the job. We welcome him to the ranks of city officials and we know that in the position he now holds he can add to his knowledge of public affairs and become a very useful official.

LETTER FROM THE CAMERON SEPTIC TANK COMPANY.

Chicago, Ill., January 4th, 1916.

Secretary, League of California
Municipalities, Pacific Bldg.,
San Francisco, Cal.

Dear Sir:—The United States Court, by an order entered at Richmond, Ky., on September 18th, 1915, has sustained our contention that the Cameron Septic Process patent No. 634,423, is **still in force**, and for your further information, we are enclosing herewith a brochure, containing a review of the litigation leading up to this order, including reference to the United States Court of Appeals decision that some years ago established the validity of this patent.

Now that not only the validity but the life of the Cameron patent has been clearly established, we have taken up this question with several California Municipalities, who have in years past installed septic tanks, for the purpose of collecting license fees due us. In several instances, our attorneys have been advised that the matter had been referred to the League of California Municipalities, and in one instance, Newman, Cal., we were told that it had been suggested to the Trustees that we write you on the subject; hence this letter.

In this connection, we beg leave to remind you that at the time this matter was presented to your organization some years ago, Mr. W. K. White, of the firm of Miller & White, patent attorneys representing the League of California Municipalities, read a report prepared by his firm, which was published in *PACIFIC MUNICIPALITIES*, the official organ of the League, February 28th, 1911. We quote the following from Mr. White's report:—

"In a suit brought by the Cameron Septic Tank Company against the village of Saratoga Springs, the

United States Circuit of Appeals for the Second Circuit adjudged the process claims of this patent to be valid, and construed them so broadly that it is doubtful if an efficient septic tank can be constructed which would not infringe one or more of such claims. The decision of the Court of Appeals is reported in Volume 159 of the Federal Reporter at page 453. The defendant filed a petition for a rehearing and, the same having been denied, thereafter petitioned the Supreme Court of the United States for a Writ of Certiorari, which petition was likewise denied.

* * * * *

"In the event of the Supreme Court deciding (in the pending Knoxville case) that the Cameron patent does not expire until the year 1916, the users of septic tanks may, in any suits brought against them, again contest the validity of such patent. However, in view of the Court of Appeals decision adjudging the patent valid, there would now be very little chance of proving the patent invalid unless some new defense, not made in the Saratoga case, can be found. In order to ascertain if there are any facts not proved in the Saratoga case and which would, if proved, invalidate the Cameron patent, an expensive investigation would have to be made."

While it is true the Supreme Court decided against us in the Knoxville suit, the equivalent of the ultimate result we sought, i. e., the establishing of the full term of our patent has now been accomplished, and as a result of the present decision our patent is still in force.

We must, of course, insist upon a recognition of our rights in connection with the numerous infringements in the state of California, and if you have any suggestions to offer whereby wholesale litigation may be avoided, we shall be glad to have you advise us.

Yours very truly,

CAMERON SEPTIC TANK COMPANY.

H. D. Wylie.

∴ What Our Pacific Coast Cities Are Doing ∴

Anaheim may call an election in the near future to vote \$30,000 for a new city hall. Bids were received Dec. 9 for a lot of salt-glazed sewer pipe.

Antioch will receive bids Jan. 10 for two cylinder attachment liquid chlorine apparatus for the sterilization of water.

Ashland, Ore., has decided to buy equipment of the California-Oregon Power Company within the limits of the municipality, in so far as electric power is concerned.

Azusa has passed resolution for improvement of Dalton Avenue by constructing cement sidewalks and curbs. On Dec. 27 bids will be received for an electrolier system.

Bakersfield. County highway bonds will be sold Jan. 4. Bonds are part of an issue of \$2,500,000 and \$500,000 will be sold in January. Plans are being prepared for the improvement of park sites and tree planting. \$45,000 has been voted for the construction of a union high school.

Berkeley has appropriated \$932,000 for the purchase of a special tax billing machine. City council is planning the improvement of a portion of University Avenue by paving. Resolution has been passed for installation of 232 electroliers. On Dec. 28 bids were received for a two-cylinder eight-ton gasoline or distillate road roller. Citizens are discussing city manager plan for the city.

Calexico has voted \$30,000 for a park.

Chico is contemplating the acquisition of a water system. A new fire apparatus will probably be purchased costing about \$9,000. Resolution has been passed for the paying of cement sidewalks on a number of streets. There is some talk of annexing new territory to the city.

Compton has received plans for the construction of a septic tank.

Corona has passed resolution providing for the improvement of more streets.

Coronado has adopted resolution for the improvement of portions of Third Street, Pomona Avenue and "A" Avenue by the construction of culverts and sunps.

Covina is planning to build a new city hall.

Dinuba will shortly construct a new public library. 1,000 feet of six inch sewer pipe will be purchased. Bids were received Dec. 15 for construction of a municipal jail.

Eagle Rock is contemplating the purchase of fire apparatus and for a water distributing system for fire protection.

Fresno has passed resolution for an electrolier system on several streets. City engineer has almost completed plans for sewerage part of the city. Bids were received Dec. 3 for a lot of water pipe and fittings.

Fairfield may decide to fix the streets in the near future.

Gilroy has decided to light portion of Second Avenue with electroliers.

Hayward received bids Dec. 11 for fire department building.

Hemet will hold a \$10,000 bond election Jan. 14 for the purpose of paving portion of Florida Avenue.

Hermosa Beach is talking of sewer construction.

Huntington Beach will receive bids Jan. 3 for improving portion of Main Street by paving, constructing curbs, gutters and culverts.

Inglewood Union High School received bids Dec. 3 for one power driven lawn mower.

Kingsburg has begun preliminary work for the paving of the state highway within the city.

Lodi wants to purchase 3,000 feet of salt-glazed sewer pipe. \$40,000 has been voted for the construction of a new school.

Lordsburg has had tentative plans submitted for a fire hall.

Manhattan Beach will hold an election Jan. 15 for the construction of a pier. Bids will be received Jan. 5 for sale of \$20,000 City Hall Construction Bonds. Bids will be received Jan. 19 for construction of a city hall.

Martinez is contemplating a lot of street improvements in the near future.

Mayfield city clerk has been instructed to purchase an asphalt boiling kettle to cost about \$25.00 and pouring pot. Resolution has been adopted for the paving of streets in College Terrace and Evergreen Park.

Mill Valley is agitating the building of good streets.

Napa wants to purchase a dump-cart to haul away rubbish.

Newport Beach will hold a \$100,000 bond election in February to build jetties at the entrance of Newport Bay.

Oakdale will shortly pave F Street.

Orange has passed resolution for installation of street lamps on portion of several streets.

Orland will improve streets at once; money having been appropriated for this purpose.

Oroville is discussing the establishment of a park and athletic ground. Clerk has been authorized to purchase four fire alarm boxes.

Oxnard is planning the construction of a new 6-room grammar school.

Pasadena received bids Dec. 17 for induction feeder regulator.

Petaluma may purchase a wire cage for the city jail. The construction of a new city hall is contemplated. City clerk was authorized to advertise for 1,200 feet of new fire hose. Board of Health will probably pass a board to inspect milk and meat.

Placerville wants to purchase a chemical engine and rock crusher.

Portland, Ore., received bids Dec. 16 for 250 water meters.

Red Bluff has taken preliminary steps for the purchase of a fire apparatus.

Redding has adopted plans for a new lighting system.

Redwood City wants to purchase forty water meters.

Redondo Beach received bids Dec. 13 for improving Lucia Avenue by paving, constructing cement sidewalks, curbs and concrete retaining wall.

Riverside received bids Dec. 7 for installation of electric poles, conduits and lamps on a number of streets.

Sacramento received bids Dec. 23 for plans for installing a single stage, double suction, horizontal shaft type centrifugal pumping unit. Bids were received Dec. 14 for a lot of sewer

work. On Dec. 23 bids were received for 23,450 barrels of fuel oil. Bids were received on Dec. 30 for preparing, engraving and lithographing 1,400 Capital Park Extension Bonds. On Jan. 11 bids will be received for one automobile truck of capacity to sustain a load not less than four tons.

Salem, Ore., will have a new bridge across the Willamette; cost to be borne by the counties of Marion and Polk; estimated cost about \$233,000.

San Bruno is agitating the construction of a municipal water system.

San Fernando is contemplating the improvement of Fourth and Fifth Streets by macadamizing, constructing cement curbs, gutters and cement lighting posts.

San Leandro has voted \$125,000 bonds for public school. The citizens are discussing installation of a fire alarm system.

San Mateo has passed resolution ordering the improvement of Third Avenue.

Santa Maria will hold an election shortly to vote on proposition of purchasing water system for \$72,500.

Santa Monica will advertise shortly for bids for \$100,000 paving job.

Seattle, Wash., wants to purchase one-ton auto truck for streets and sewer department.

Selma expects to have unpaved portion of state highway through the city completed before spring.

Selby has voted \$11,000 for a new school.

South San Francisco received bids Dec. 20 for constructing concrete curbs, gutters, oiled macadam pavement and sewers.

St. Helena will receive bids Jan. 11 for constructing concrete curbs and sidewalks.

Stockton is discussing the installation of a fire alarm system on portion of Main Street.

Susanville may install a fire alarm system in the near future.

Taft will sell \$60,000 high school bonds in January.

Tropico has passed resolution for the improvement of a number of streets. Bids were received Dec. 7 for a lighting system.

Tracy wants more cement sidewalks.

Turlock has received plans for a public library. Resolution has been passed for improving portion of Diablo Street by oiling and curbing.

Vallejo has passed resolution for the improvement of a portion of Sonoma Street by paving.

Whittier will probably improve Lemon Street with oil and macadam.

Winters will receive bids Jan. 11 for purchase of \$7,000 municipal improvement bonds.

Woodland will hold an election in the near future to vote \$45,000 bonds for improvement of the municipal water system and \$5,000 for the construction of a municipal ice plant.

CALIFORNIA COUNTIES.

Contra Costa County. It is rumored that a new highway connecting Richmond with interior of the county will be constructed.

Kern County will receive bids Jan. 3 for steel counter in the new jail building. On Jan. 6 bids will be received for grading, paving and construction of culverts on Division 6, Section 1, McKittrick Maricopa Road.

Los Angeles County received bids Dec. 27 for trench digging machine for Los Angeles County Irrigation District No. 3.

Monterey County received bids Dec. 6 for grading and macadamizing portion of San Miguel Canyon Road.

Riverside County received bids Dec. 29 for improving portion of Route 9 (Mecca to Shavers Wells), by graveling and oiling the roadway 5.36 miles. On Dec. 22 bids were received for grading and paving with concrete 13.43 miles.

San Mateo County received bids Dec. 6 for constructing about 33,000 feet of guard fence on Redwood City to San Gregorio Road. On Dec. 13 bids were received for construction of 4 inch waterbound macadam pavement on portion of Mission Road near Holy Cross Cemetery.

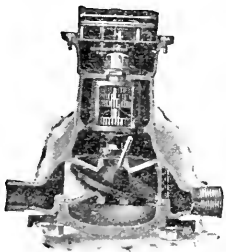
Santa Barbara County will receive bids Jan. 3 for constructing reinforced concrete bridge across Tajiguas Creek. On same date bids will be received for construction of reinforced concrete bridge across Corral Creek. Bids will be received on above date for graveling and paving portion of Santa Maria-Guadalupe Road in the 5th Road District.

Santa Cruz County will receive bids Jan. 3 for construction of bridge across Branciforte Creek.

Stanislaus County will receive bids Jan. 11 for plumbing work in the courthouse. On same date bids will be received for construction of a reinforced concrete bridge over the San Joaquin and Kings River Irrigation Company's Canal, near the town of Crows.

Tehama County will receive bids Jan. 4 for concrete bridge across Brickyard Creek on the Red Bluff and Corning Road.

Tulare County is having plans drawn for the construction of a new jail.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1914**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

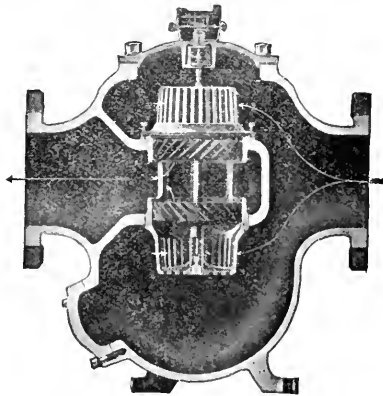
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Alleys, ordering the closing of certain ones. Pasadena, 155-c.
- Automatic elevators, regulating. Portland (Ore.), 171-b.
- Buildings, regulating the construction, use and removal of. Cloverdale, 157-a.
- Bonded debt, ordering the submission of the proposition of incurring. Huntington Beach, 148-c.
- Buildings, regulating the construction, alteration and repair of. Los Banos, 149-a; Daly City, 160-b.
- Buildings, sheds and other structures, the construction and renewal of roofs, placing and maintaining of lumber, wood, straw and other inflammable materials, concerning the regulation of. 152-c.
- Barber shops, providing for the closing of on Sunday. Sacramento, 154-e.
- Businesses and occupations, licensing and regulating. Tropic, 163-b; Selma, 168-b; Hoquiam (Wash.), 169-a.
- Coyote scalps, fixing a bounty on. Lassen Co., 145-b.
- City planning commission, providing for the establishment, government and maintenance of. San Bruno, 164-a.
- Diseases, infectious, contagious and communicable, and the duties of attending physicians and householders in regard thereto, relating to. Vacaville, 159-b.
- Dogs, providing for the muzzling of. Lassen Co., 146-b.
- Dogs, taxing. Modoc Co., 159-c.
- Dairies, regulating. Sierra Madre, 156-c.
- Dogs, forbidding owners to suffer, permit or allow to track or trail deer, except during the season that deer may be lawfully killed. Napa Co., 154-b.
- Dealers in certain second-hand articles, requiring to report to Marshal all purchases and sales. Santa Ana, 167-a; Daly City, 165-a.
- Dancing, prohibiting certain forms of. Selma, 167-c.
- Electric service, fixing rates for, establishing rules and regulations relating to, and governing and fixing a penalty for the non-payment of. Ashland (Ore.), 163-c.
- Electrical work, providing rules and regulations governing, and licensing persons doing. Berkeley, 155-f.
- Electrician, appointing and defining powers and duties. Berkeley, 155-f.
- Electricity, granting the right to erect superstructures, suspend wires, etc., for the purpose of transmitting and conducting. Napa, 166-c.
- Electric light fund, creating. Ashland, 163-c.

- Engineering**, creating a department of, providing for the appointment of a city engineer and fixing his duties. Sacramento, 167-c.
- Electrical code**. Portland, 168-a.
- Fire**, establishing limits and providing for protection against; regulating the construction of buildings, and the use or maintenance of combustible materials. Cloverdale, 157-a.
- Fire ordinance**, regulating construction of buildings, the construction and renewal of roofs, and the keeping of lumber, firewood, straw and other inflammable materials within the fire limits. Marysville, 152-c.
- Fire escapes or exits from theaters and public halls**, regulating. San Bruno, 153-c.
- Gasoline**, regulating the storage of. Los Banos, 149-a; Marysville, 153-a; Daly City, 160-b.
- Gas**, granting franchise to supply. Kern Co., 158-d.
- Grades**, regulating the measurements of. Santa Cruz, 159-c.
- Games of skill or chance**, prohibiting the playing of for money or articles redeemable in or exchangeable for money. Salinas, 167-b.
- Health**, defining and punishing nuisances against. Los Banos, 156-e.
- Insanitary structures or buildings**, declaring to be public nuisances. 171-a.
- Jitneys**, regulating. Marysville, 153-b.
- Licenses**, regulating and imposing; prescribing how and by whom obtained, and providing a penalty for the non-procurement of. Delano, 161-a.
- Liquors**, regulating and licensing the business of selling. Willits, 147-c, 148-a; Hoquiam (Wash.), 170-a.
- Licensing**, for revenue and regulation, trades, occupations and business. Anaheim, 147-a; Los Banos, 150-a; Selma, 168-b; Hoquiam (Wash.), 169-a.
- Laundries and wash houses**, licensing (amend.). Exeter, 155-d.
- Licenses**, regulating the issue; rates and classes of, providing for the collection of, and for the rebates on unexpired licenses in force. Napa, 163-a.
- Misdemeanors**, declaring and providing for the punishment of. Delano, 160-a.
- Motor buses**, licensing and regulating. Des Moines, Iowa, 146-c.
- Motor buses**, regulating the operation of. Anaheim, 158-c.
- Nuisances against public health and safety**, defining and punishing. Los Banos, 156-e.
- Official bonds**, fixing. Delano, 157-e.
- Public nuisances**, declaring insanitary structures to be, and providing for the abatement of. Daly City, 171-a.
- Professions**, licensing (amend.). Needles, 151-a.
- Purchasing agent**, prescribing the duties of (amend.). Sacramento, 154-d.
- Phylloxera**, to prevent the introduction and spread of. Tulare Co., 154-c.
- Physicians and householders**, relating to their duties in regard to infectious, contagious and communicable diseases. Vacaville, 159-b.
- Property**, providing for the acquiring of. Alameda, 166-b.

- Poker, freeze-out, or games of skill or chance**, prohibiting the playing of in any place of common or public resort, for money, representative or articles of value, checks or tokens, redeemable in or exchangeable for money. Salinas, 167-b.
- Processions of persons or automobiles**, regulating. Sacramento, 167-d.
- Railroad**, permitting a corporation to operate and maintain track, etc. Calexico, 147-b; Marysville, 152-b; Sacramento, 155-a.
- Railroads**, regulating the operation of. Santa Barbara, 148-b.
- Rubbish**, regulating the disposal of. Los Banos, 149-a; Daly City, 160-b.
- Real estate dealer or stock broker**, licensing (amend.). Needles, 149-c.
- Sanitary conditions within or surrounding markets, shops, creameries, groceries or provision stores, bakeries, manufactories, restaurants, hotels and market wagons**, regulating. Vacaville, 159-a.
- Seal**, adopting. Delano, 157-d.
- Streets, alleys, lanes and highways**, regulating the construction and repair of (amend.). Sausalito, 158-a.
- Sewage reduction plants, sewage farms, sewage farming and irrigation with sewage effluent**, regulating the establishment of. Los Angeles Co., 156-d.
- Shows, exhibitions and games**, licensing (amend.). Salinas, 151-b.
- Signs over sidewalks**, regulating the construction and maintenance of. Livermore, 152-a.
- Sewer**, requiring that buildings be connected with and declaring that any such buildings not connected to be a public nuisance. Livermore, 154-a.
- Streets**, regulating traffic upon, the use of, and the care of vehicles and horses on and over. Los Banos, 156-b.
- Second-hand articles, certain kinds of**, requiring dealers in to make out and deliver daily to the City Marshal a report of all purchases and sales. Santa Ana, 167-a; Daly City, 165-a.
- Trees and shrubs**, regulating the planting, removal and care of. Modesto, 161-d.
- Trades, pursuits, occupations, avocations, employments and businesses**, providing for the licensing of. Anaheim, 147-a; Los Banos, 150-a.
- Traffic and travel**, governing. Redwood City, 149-b; Los Banos, 156-b; Inglewood, 162-a; Sacramento, 162-b.
- Trustees**, fixing time for meeting of. Delano, 157-c.
- Traction engines, tractors, heavy motor vehicles, and heavily loaded vehicles of any description**, regulating the use and operation of upon the public highways. Tulare County, 159-d.
- Vehicles for hire**, regulating stands for, and providing for the issuance of permits. Bakersfield, 158-c.
- Vehicles**, regulating the riding, driving and propelling of upon the streets. San Leandro, 161-c.
- Water**, fixing rates and providing rules and regulations governing the furnishing of by the city. Fort Bragg, 151-d.
- Water commission sinking fund**, creating. Burlingame, 157-b.

LOWER LIGHTING RATES FOR SAN JOSE.

The Pacific Gas and Electric Company has been denied by the Railroad Commission at San Francisco a rehearing of the complaint of the city of San Jose against the company. The commission fixes a schedule of rates and rules for the company to put into effect in the San Jose district as follows: Domestic and business lighting and energy, 7 cents

a kilowatt hour for the first twenty kilowatt hours, 4 cents for the next 330, and 3 cents for all over 330. The minimum monthly charge is \$1 a meter. The charge to the city for lighting is \$33 a lamp per annum. Agricultural charges are based on a minimum of \$24 per annum. The commission estimates that the company's revenues from the San Jose district averages \$555,786 a year.



FIRST IN SAFETY

"Sunset Route"

Along the Mission Trail and through the Dixieland of Song and Story.

"Ogden Route"

Across the Sierras and over the Great Salt Lake Cut-off.

"Shasta Route"

Skirting majestic Mount Shasta and crossing the Siskiyou.

"El Paso Route"

The Golden State Route through the Southwest.

Two Daily Trains to New Orleans via Los Angeles, Tucson, El Paso, San Antonio, and Houston. Connecting with Southern Pacific Steamers to New York.

Four Daily Trains to Chicago via Ogden and Omaha; or via Denver and Kansas City to St. Louis. Shortest and Quickest Way East.

Four Daily Trains to Portland, Tacoma and Seattle—through Oregon and the Pacific Northwest.

Two Daily Trains to Chicago and St. Louis via Los Angeles, Tucson, El Paso and Kansas City.

CHOICE

OF

Four Routes EAST

NEW ORLEANS—OGDEN—PORTLAND—EL PASO

Southern Pacific Service is the Standard

Best Dining Car in America

Oil Burning Engines—No Cinders, No Smudge, No Annoying Smoke

Awarded Grand Prize for Railway Track, Equipment, Motive Power and Safety-First Appliances San Francisco Exposition 1915

For Fares and Train Service, Ask Southern Pacific Station Agent

Mention "PACIFIC MUNICIPALITIES"

When writing for Catalogues

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

Neptune Meter Co., S. F. & L. A.

National Meter Co., 681 Market St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

HAROLD S. BUTTENHEIM, Editor

M. V. FULLER, Associate Editor

The American City

published at 87 Nassau Street, New York (Chicago office, 327 South La Salle St., San Francisco office at 320 Market Street,) has just published its annual

MUNICIPAL BUYERS' GUIDE FOR 1914-1915

This guide is a book of 140 pages containing classified lists and information in regard to the products of over three hundred advertisers in THE AMERICAN CITY, representing leading manufacturers of road building and paving materials and machinery, water works supplies and equipment, street lighting, drinking fountains, trash and garbage cans, fire department apparatus and supplies, trees and shrubbery, as well as mechanical equipment for park and cemetery use, etc. Names are also included of many leading consulting engineers and landscape architects available for municipal improvement undertakings.

The price of this Buyers' Guide is 50 cents, but any official having to do with purchases of machinery or supplies may secure a copy free of charge by making request for same to our nearest office.

The American City

87 NASSAU STREET
New York City

320 MARKET STREET
San Francisco, Cal.

327 SOUTH LA SALLE ST.
Chicago, Ill.

In addition to sending the Municipal Buyers' Guide free of charge, we shall also be glad to send you a copy of THE AMERICAN CITY (in case you are not already a reader of it) together with an attractive combination subscription offer which we are making in connection with "Pacific Municipalities".

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

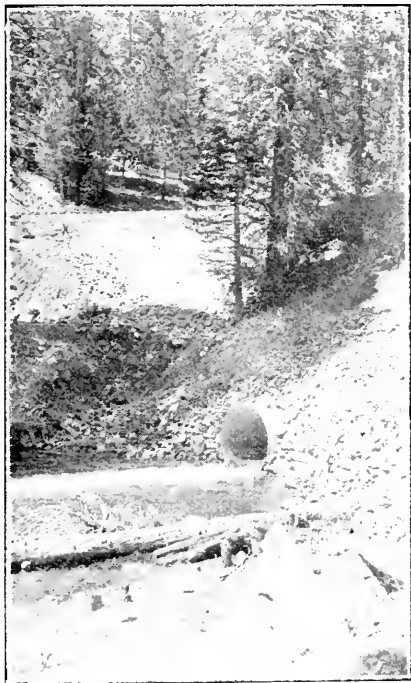
United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.



THEY ARE BUILT TO STAND THE LOAD

Heavy traffic has no terrors for **ARMCO CULVERTS**. They are built to withstand great loads and to meet the severe service under highways and railroads satisfactorily.

ARMCO IRON CULVERTS

have solved the troublesome drainage problems of numerous California cities, and are all giving a good account of themselves by rendering efficient and permanent service.

Write us for particulars
and prices.

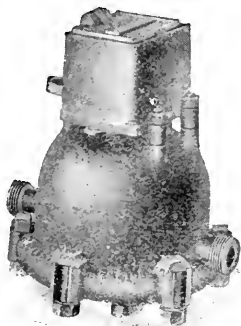
CALIFORNIA CORRUGATED CULVERT CO.

LOS ANGELES
411 Leroy St.

WEST BERKELEY
400 Parker St.

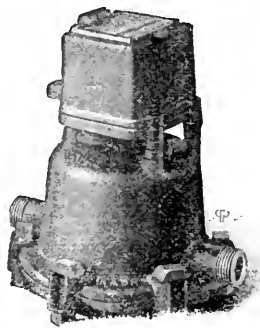
WATER METERS

FOR ALL KINDS OF SERVICE



EMPIRE METER

HIGHEST AWARD
AT THE
P. P. I. E.



NASH METER

National Meter Co.

Office, Stock and Service Shop

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS: WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Housing in England	Harvey N. Shepard	43
History and Economics of Guaranties of Pavement on State and Municipal Highways	George C. Warren	50
Additional Reports of Municipal Progress		59
Methods of Assessing Property		61
Municipal Lighting Rates Established by Railroad Commission		69
Trade Notes		70
Reply to Letter from the Cameron Septic Tank Co.		71
Burlingame's 1916 Street Jobs		72
Public Utilities and Franchises		74
Municipal Bonds Scarce		75
Notes		76
City May Sell By-Product		76
What Our Pacific Coast Cities Are Doing		77
Titles of New Ordinances Received		80

ENGINEERING * BUILDING * CONTRACTING

Publication Office

Paing San Francisco, Cal.

Two Dollars a Year

Single Copy 25 Cents

NEW FORMS

To comply with 1915 Amendments to 1911 Act

An Entire Change of Forms and Records under this Act

If you are operating under the 1911 Act and Amendments, you will need the new forms as there have been many important changes.

WE CAN SUPPLY THE CORRECT BLANKS

You will need new sheets for your Street Superintendent's record, as all forms have been changed.

Our Publication the "Improvement Act of 1911" is being revised by W. J. Locke and will be ready for delivery shortly. This booklet will contain very valuable information and you will find it indispensable.

A. CARLISLE & CO.

SPECIALISTS IN MUNICIPAL SUPPLIES

251-259 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

Both Scientific and Practical Tests Have Proved The Superiority of Bitulithic

laid over new concrete foundation, surfacing old macadam and surfacing existing worn out pavement surfaces.



BOSTON, MASS.

Bitulithic Pavement. Columbia Road (at Hewins Street). Laid over old Macadam, 1915

As to the work you are planning this spring—Bitulithic is worthy of your careful consideration—Why specify inferior constructions.

It is cheaper to have a good substantial bituminous surface in the beginning than to have a cheap, inferior construction which has to be repaired within a year or two after it is laid. Many cities have found this out.

BITULITHIC has been adopted by over 310 cities throughout the United States and Canada as a standard pavement for their streets.

Why Not Build for all the Time When It Costs But Little More

BITULITHIC

Is the pavement you are looking for.

Bitulithic Once — Bitulithic Always

Specify Bitulithic

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
50 Church St.
Los Angeles, Cal.
925 Calif. Bldg.

Chicago, Ill.
10 So. La Salle St.
Portland, Ore.
Journal Bldg.

Rochester, N. Y.
303 Main St. West
Phoenix, Ariz.
204 Noll Bldg.

Richmond, Va.
Virginia Railway & Power Bldg.

St. Louis, Mo.
Railway Exchange Bldg.

Nashville, Tenn.
605 Independent Life Bldg.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	-	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-	-	-	(City Attorney of Napa)	-	-	WALLACE RUTHERFORD
Second Vice-President	-	-	-	-	(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON					Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 2

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

FEBRUARY, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

HOUSING IN ENGLAND

Written for "Pacific Municipalities" by HARVEY N. SHEPARD, of Boston, Mass.

NOTE.—The author of this article was born in Boston and has always lived there. In 1880 he was president of the City Council; later he served as trustee of the Public Library. From 1880-87 he was First Assistant Attorney General of the Commonwealth. He has been a member of the Legislature and at the present time is one of the Civil Service Commissioners of the state. Mr. Shepard has always taken a great deal of interest in municipal affairs; he has written numerous articles and also delivered many important addresses on the subject. He has had the opportunity of making a personal inspection of civic activities in Europe, one phase of which is treated in the following article.

Unable in August of 1914, because of the European War, to go to the Continent, as I had expected, I employed a portion of my enforced stay in England in an investigation of the Housing Problem. Inasmuch as this problem confronts us, as well as the English, if we wish to remain a vigorous and contented people, what they have done to solve it is of value to us, both as an example of what we ought to do and also what we should avoid. The population of England and Wales is 32,000,000. Two-fifths of these people are crowded together upon one eight-hundredth part of the land, another two-fifths occupy one two-hundred and fiftieth part, and the remaining one-

fifth is scattered over the remainder of the land. To state this in another form: 25,000,000 of the 32,000,000 are living in towns, as against 7,000,000 in the country; and 13,000,000 of these 25,000,000 are living in tenements of four rooms or less. The census returns show that this evil is present also in the United States, though not now to the same extent, and that our cities also are growing continuously at the expense of the country. They show also that we cannot overcome the forces which bring large populations upon small areas, and that the cry "back to the land," however attractive it may be, is a vain cry.

The most serious result of this over-

crowding is a high death rate among the children, and a deterioration of the vitality, and therefore also the wealth producing power, of large numbers of men and women, because light and air are essential to human health. "The problem of the last generation," says Professor Muirhead, "was to provide gas and water; the problem of the next is to provide light and air."

Another result is that in a vast majority of cases they are poor people who live upon dear land and rich people who live upon cheap land, which is absurd. The rich man may set his house back from the road, and enjoys peace and quiet, when he goes home after his day's work is done. The poor man is forced to live upon a thoroughfare, in noise and dust, and is charged extra for it. A third result is the wasteful neglect of the food producing possibilities of an increasing proportion of the land.

In England during the last fifty years no fewer than twenty-eight Acts of Parliament have been passed dealing with the housing question, and for the last ten years a strenuous agitation has grown steadily. In the main four remedies are now on trial; town planning, municipal ownership, sanitary control, and co-partnership tenants societies.

Town planning proposes to deal with the difficulties in a comprehensive manner, instead of in a piecemeal fashion; and to make it possible to combine the means of livelihood in the city with the health-giving opportunities of the country. It cannot wholly eradicate the slums, which now exist, and it cannot save the millions of money which are expended on street widenings and the demolition of buildings, which ought never to have been put up; but it can control the development and growth of urban suburbs. The structure of a house is but the beginning of a

home. Proper surroundings also are essential; and these can be provided in new districts economically and permanently. Modern means of communication have made more land available for residences than was the case when people were obliged by the exigencies of their occupations, and the absence of quick and cheap means of transit, to congregate in restricted areas. It can provide the poor with open spaces and playgrounds for their children; and it is recognized more and more every day that open spaces are as necessary to the health of a town, as streets are to its traffic. And it can relieve the rich from the constant dread that their homes may be spoilt by the erection near them of objectionable buildings. It ought not to be possible that a man's property should be injured by the manner in which his neighbor's land is used.

Town planning is an endeavor to do for a town what an architect does for a house. He considers what he wants, and then draws his plans, before he begins to dig his foundations. And the first principle of town planning is to consider before hand its constituent parts, and then to arrange them in such a way that the result shall show an ordered harmony. Wide avenues are provided for the main traffic; narrower streets for ordinary traffic; and again narrower for purely residential quarters. High buildings, close to one another, are allowed on the main avenues, and lower and more dispersed, the further away they are. Parks and small open spaces and playgrounds are provided for before hand, instead of waiting till the land required has risen in price. Business offices should be in the center of the town and the larger rent is more than met by the time and money saved by the convenience of this position. Public buildings also should be in the centre of the town, and in commanding posi-

tions, both for convenience and also as a daily inspiration to local patriotism. Shops of course should be in the main avenues, where customers continually pass to and fro. Dwelling houses cost less, and are pleasanter, if situated on minor streets. Parks, playgrounds and open spaces, are for rest and recreation; and, therefore, it is more efficient, as well as more economical, to put them in side streets or at the backs of houses. This is especially important in the case of playgrounds for little children. Among the poor the mother has no time to take her babies to the park, nor is it safe for them to cross the main avenues. Small plots of open ground then should be dotted about at frequent intervals, so that the little ones may play without danger to themselves. It is obvious that a factory should not be placed next to a park; but a hospital, so placed, would derive great benefit therefrom for its inmates, without in any way interfering with those who use the park. Many hospitals, on the other hand, are situated on busy thoroughfares, with tall buildings all around them.

These things, unfortunately, may not be done unless the local authorities are given the power to control. All the owners of the separate lots of land will not always come into an agreement to develop the whole area upon one harmonious plan. There generally is one at least who will not be persuaded. It therefore is necessary that the local authorities may be able to compel an agreement. Town planning schemes "as respects any land likely to be used for building purposes and of any neighboring land" may be prepared by the land owners, or, if they fail to do this, by the local authorities who may compulsorily purchase such lands. The words "likely to be used for building purposes" include open spaces, roads, streets, parks, and recreation grounds. Any building, or other

work, contravening such a scheme, may be removed, pulled down, or altered, by the local authorities, at the cost of the persons in default. Any person, whose property is injured by such a scheme, is entitled to compensation; and, if his property has been increased in value, then one-half of that increase can be recovered from him.

The Hornby Street Area in Liverpool gives an excellent example of work done under the second remedy; municipal ownership of land and buildings. Upon this area of 27,600 square yards there were 534 houses, with a population of 2,431. The houses were situated in narrow and ill ventilated courts. Both land and buildings were acquired by the city, 2,000 square yards were used in street widenings; 3,000 square yards for grass plots in front of the dwellings; and 1,600 square yards, in the centre of the area, for a recreation ground, surrounded on three sides by shrubberies six feet wide, and provided with gymnastic apparatus, a sand pit, a large shelter, and a drinking fountain. The new dwellings comprise twenty-three blocks containing 453 tenements, of which 50 are four roomed, 221 three roomed, 173 two roomed, and 9 one roomed. They accommodate 2,446 persons. In addition there are a superintendent's house and office, seven shops, and a court yard. The buildings, with the exception of the superintendent's house, are three stories in height, and are of a fireproof character, the floors consisting of steel joists, three feet apart and embedded in seven inches of concrete. The grass plots in front of the dwellings have low iron railings, with strong seats here and there; and at the rear there are no separate yards, but the whole space is made a playground for the children. The four-roomed tenements are rented at \$1.08 to \$1.26 a week, the three-roomed at \$0.96 to \$1.08,

the two-roomed at 66 to 84 cents, and the one-roomed at 42 to 60 cents, according to the floors upon which they are situated. These rents are about the same as were paid by the tenants in their former unsanitary habitations. That these, and other dwellings provided by the city under similar conditions, are appreciated by the tenants is best shown by the facts that there are rarely any to let and that during the year 1913 96 per cent of the rents due was actually collected.

Like work has been done in many other English cities, and notably on a very large scale in London, where the schemes, either complete or under way, provide for 100,000 persons; and it is worth all it has cost in the gain to the tenants, and to the community in the breaking up of the slums. But it has reached only a very small proportion of the working classes, and it is probable that the cost will be an obstacle, perhaps insuperable, to any large extension.

The third remedy begins with the report of the medical officer of health, who is bound to bring to the attention of the local authorities any houses in his district, which are unfit for human habitation. If they agree with him, an order is served upon the owner to repair the houses; if the repairs are not made within a reasonable time, a closing order is issued and the houses must remain empty for three months; and, if the owner still does nothing, an order is passed that the houses be demolished. Though the owner may appeal from this order of demolition to the court, it is said this right has never been exercised.

Since by dealing with individual houses in this gradual manner, as a general thing only the bad property is repaired or demolished, and the sound is left standing, one of the causes of

great waste under the second remedy is avoided, and also there is no danger of a house famine. The cost, too, is put on the right shoulders, and it makes neglect unprofitable. But it does happen sometimes that it is necessary to remove one or more good buildings because the unsanitary houses are found generally in thickly built neighborhoods; and in this case the owner receives compensation. There seems to be no doubt that this third remedy, when administered with vigor and discretion, is capable of great results, without putting any serious burden upon the taxpayers. Newcastle has dealt with 250 houses; Blackburn has closed 800; Birmingham has dealt with 4,000, and demolished 1,000; Liverpool has demolished several thousand; and Manchester has dealt with 1,400, and demolished 1,300.

If, as is estimated, there are 5,000,000 persons in England, who live in houses which require improvements, either in their fabric or surroundings, it is apparent that the second remedy is impossible financially, no matter how generous or enthusiastic the taxpayers may be; but under the third remedy it is possible to remove gradually all the existing housing evils. It also is much more likely to provide separate houses rather than tenement dwellings.

The fourth remedy, unlike the other three, belongs entirely to private enterprise, and is a financial investment as well as a philanthropic measure. I shall not describe Port Sunlight and Bournville, beautiful though they be, because they are not co-partnership enterprises. Besides the rents received in the first do not cover the charges incurred, and very few of the houses in the second are let at rents within the means of the poorer working man. The first step is to secure an option upon suitable land on the outskirts of an industrial centre. The promoters

then call a meeting of those they think may join the society, and the details are explained in full. If it appears that the interest is sufficient, then a plan is made for the development of the land upon hygienic, artistic, and economic principles, and a prospectus is issued, explaining the objects of the society and inviting subscriptions. The share capital is raised in shares of five to fifty dollars each, upon which no dividend greater than five per cent may be paid, all further profit being used, either upon the property of the society or as a bonus to its tenants. No member may hold more than twenty fifty dollar shares. The houses upon the land are built from the proceeds of loan stock, upon which four per cent is paid, and which has a prior claim to shares on the assets of the society. Every tenant must acquire, by gradual payments and by the dividends from the surplus profits, a certain amount of the loan stock, dependent upon the rental value of his house. If he ceases to be a tenant he may sell his stock or continue to hold it, subject, however, in both cases to the right of the society to buy it at its full cost for the incoming tenant.

The houses built are simple, but substantial, with special attention to the surroundings, open spaces, recreation fields, concert and reading rooms; the symbols of friendly association, good fellowship, and civic sympathy. They are let at rents sufficient to pay interest and dividends, the surplus profits, after providing for expenses, repairs, and depreciation, being divided among the tenants in proportion to the rents paid by them. Each tenant's portion, however, is credited to him in shares instead of being paid in money. An adequate sum is set aside every year as a sinking fund, so that, as developments take place in house accommodations, which make expenditures desirable in order that the

society houses may be equal to any others in the market, a fund is available from which the expenditures can be made, and thus the full value of the capital is maintained.

This system has many advantages over that of an ordinary building society. In the latter the member makes himself liable for the purchase money, and, if he leaves the neighborhood, the house may be a burden on his hands. In nine cases out of ten a workman, living in his own house, has to face a heavy loss on the investment of his savings, when he has to choose between unemployment and removal to a neighborhood where his labor is in demand. Under the co-partnership system, on the other hand, when a member leaves the neighborhood, the society, not the tenant, has a house on its hands. He has his shares in the society, equal in value to the value of his house, which he can, if he likes, realize without loss; or, if he leaves his savings where they are, he will receive his dividends as usual. So far there has not been a single failure.

Another advantage is that no tenant is in danger of having his property injured by the careless and untidy way in which his neighbor's house is kept. No member can say: "The house is mine and I can do with it as I please." They all can say "these houses are ours." Public opinion on the estate then is far too strong, in favor of cleanliness and order, for it to be possible that any tenant should neglect his house without being called to account by his partners.

When a workman wants to put by something for a rainy day, it is difficult to find an investment possible for his small savings, which is safe and permanent. Co-partnership societies give him an opportunity to acquire gradually the value of the house, in which he lives, and at the same time guards him against all risks.

Capital, too, finds a safe and sound investment. The greater the surplus profits the greater the security for the regular payments of dividends. It is to the interest of the tenant members who receive the surplus profits, to make their profit large, by taking care of their houses and so lessening the expenses of repairs, by helping to find tenants, and by the punctual payment of rent, and their share capital provides a fund upon which the society can draw, if necessary, to pay any arrears of rent. Loss from this cause, therefore, is reduced to a minimum. This system also meets the question of unearned increment. It gives increased security to the shareholder and the loan stockholder; but also, when these have received their five per cent and four per cent the surplus, due to unearned increment, goes to the tenant members, as increased bonuses on their rentals.

This system promotes good houses, gardens, and playgrounds, and it secures the personal interest of the tenant in the prosperity of the estate, with the fewest obstacles to the mobility of his labor and capital. The rentals are by the week, the month, the quarter, or the year; and the notice to terminate the tenancy is also by the week, month, quarter, or year. The rentals range from \$1.08 to \$3.60 a week, \$250 to \$400 a year. This system principally has found expression in what is known as the Garden City idea, that is, the restriction of the number of houses to be built per acre, and the provision of open spaces, where the children and the young people can play and the older people can rest and enjoy themselves. It undoubtedly has captured the imagination of the English people, unimaginative as they are reported to be. Launched about twelve years ago at Ealing, the movement has become one of the most remarkable of the century.

Starting with the modest purchase of plots of land for nine houses in 1901 at a cost of \$2,000, additions were made of 41 plots, and then of 20 more, bringing the value of the property in 1904 up to \$100,000. Then the Ealing Society began to purchase in acres, and January 1, 1913, the cost of the property was over \$1,000,000. During this whole period, not only has the society paid the dividends upon its share capital, but also the surplus dividends to its tenants. There are two of these societies in the suburbs of London, one near Leicester, one near Manchester, three near Birmingham, one near Wolverhampton, one near Stoke-on-Trent, one in the Lake District, Garden City, the most ambitious of them all, and the Wayford society, the first distinctly rural society, providing small holdings of from one to ten acres, with houses and the usual out-buildings, and many others. The Leicester estate of 48 acres, although near a large town, is delightfully quaint and rural, with beautiful approaches, and on a commanding position in a well wooded and picturesque district, and combines the rural beauty of hedgerows and trees with the urban advantages of gas and water. One of the Birmingham estates consists of 54 acres, and the Stoke of 38, both laid out upon like principles.

It was convenient for me, both because of its situation as a part of metropolitan London and also because of my acquaintance with some of its officers, to give special attention to the Hampstead Garden Suburb, which I could reach quickly by the underground tube, a motor omnibus, or a municipal tram. It contains 655 acres, including one open area of 80 acres, and many small open spaces and playgrounds dotted about all over the suburb. The houses are pretty and wholesome, with gardens and shrubbery, and are all upon an

orderly plan, so that each house is placed with a regard to every other house. The society does not build for one type of tenant only, but meets the needs of a great variety of persons, and it has houses which let from \$1.38 a week to \$600 a year. I examined the interiors of several houses. The first, within three minutes walk of the tube station, has four bedrooms, and two reception rooms, with kitchen, bathroom, and lavatories and a good garden, at \$250 a year. The second, at \$500 a year, has six bedrooms, two reception rooms, a lounge hall with a fireplace, kitchen, bathroom, lavatories, and a store room.

In the centre of the property is a broad, open space, round which the communal life may gather. Here are two churches, the church of England and a free church, in which all may share. Here also is an institute for lectures and concerts, and a technical school. Not far away is a club house, every tenant being eligible as a member for a very small subscription, with tea and dining rooms, a reading room, a billiard room, and adjoining tennis courts, in which at the time of my visit several people were playing. Near the centre also are about 100 acres of beautiful woods, with roads and paths leading to groups of houses, the charming situation of which will never be spoilt by the disappearance of the trees.

The Letchworth Garden City, as I have said, is the most ambitious of all. It recognizes that the steady stream, from rural to urban districts, is a natural one, and that any attempt to stem it is doomed to failure. It recognizes also the evils of an underpopulated country and overpopulated towns, with their dreariness and slums; and it seeks to meet these evils by taking the town into the country. It began with the purchase in 1904 of six square miles of

undulating land in Letchworth, thirty-five miles to the north of London. A survey was made, a water supply found, gas and electric works erected, mains and wires laid, roads constructed, and a railway station provided. Two-thirds of the land is left as an open belt around the estate, for farms, golf links, and recreation grounds. There also are many small spaces, an area of 200 acres for recreation purposes, a beautiful common of 70 acres, and a finely timbered park. All these things belong to the society, and the dividend upon its shares is limited to five per cent, the surplus profits going to the inhabitants in the reduction of taxes, or provision of parks, halls, libraries, etc.

The buildings are put up by the society and by individuals, and if by the latter upon ground leases from 99 to 999 years, practically a freehold. The society builds houses on a rent purchase basis from \$150 a year. For those who do not wish to build or buy themselves, the society has furnished houses, to be let for long or short periods. No qualifications of membership or holding shares is in any way essential for residence or building in Letchworth.

Over 8,000 people have settled at Letchworth and over 60 factories and workshops have been erected. There are 1,800 houses, several churches, a first-class hotel, which cannot sell intoxicating liquors, banks, four public halls, a theatre, political and social clubs, a swimming bath, public and private schools. There are charming residences, far removed from sight and sound of the factory area; and the homes of the workmen are so placed as to be convenient, and yet not so near as to have the factory under their noses. Every house has an abundance of fresh air and sunlight, as the maximum number of houses to an acre is twelve.

The History and Economics of Guaranties of Pavement on State and Municipal Highways

By GEORGE C. WARREN

Notes of an address delivered to the Columbia University Graduate Engineering Class, at the Auditorium of the Automobile Club of America (New York) on the evening of January 24, 1915.

I purpose to discuss this important phase of municipal policy from four points of view, to wit: Historical, Legal, Practical, Specifications.

Prior to 1876 it had been the custom, in a number of European cities, to require contractors, in addition to constructing pavements at the contract prices, to maintain them for a term of years at fixed prices per square yard per year, the prices being such as it was estimated would yield a reasonable profit to the contractor on the maintenance feature if the pavement should be well laid. The general policy of "Guaranties" without special allowance for "maintenance" began in this country, and it is believed began in the world with the laying of the asphalt pavement on Pennsylvania Avenue, Washington, in 1876. The then recently organized American Asphalt Paving Company began operation under patents of Prof. Edward D. De Smedt and Gen. W. W. Averill, under which it was proposed to duplicate, at lower cost, the then successful European asphalt pavements (rock asphalt, being limestone naturally impregnated with bitumen) by mixing sand and pulverized limestone with the comparatively pure Trinidad asphalt, which had then begun to be an article of commerce.

The promoters had convinced the highly competent Commission, Generals Quincy A. Gilmore and N. C. Wright of the U. S. Army Engineer Corps, and Mr. Edward Clark, the Architect of the Capitol, of the merits of the new pavement, but the Commission wanted addi-

tional evidence of success and of the faith of the Company promoting the pavement, and exacted a three year guaranty without extra charge therefor. The pavement proved to be a success and there was no occasion to enforce the guaranty. If the pavement had been a failure the guaranty, if legal, would probably have proved equally bad because the contracting company would at that period have been financially unable to "make good."

With the early succeeding adoption of asphalt pavements in Buffalo, Erie, Omaha and Columbia, the promoters made their propositions attractive for what was regarded as an experimental pavement by voluntarily offering a five year free guaranty as it had been given in Washington. And so the adoption of the pavement, coincident with the requiring of five year guaranty, became the established custom of municipalities and of the, by this time, experienced and responsible asphalt paving companies.

As brick and other new types of pavement developed, municipalities exacted the same guaranty that had already become the general custom with respect to asphalt pavements, and such five year guaranties became the almost universal custom in the United States and Canada. Even during this early period the satisfaction given by the guaranty in each case depended very largely on:

- 1st: The success of the pavement;
- 2nd: The commercial interest of the contractor in maintaining his pavement

and reputation rather than on the ability of municipalities to secure good pavements by attempts to legally enforce the guaranty provisions.

In or about the year 1896 the modern repaving of the City of New York, which then had but little pavement other than macadam and granite block, had become a fixed policy, and the Commissioner of Public Works, Gen. Charles H. P. Collis, made a special trip abroad to study the pavements of European cities. On his return he recommended asphalt as the type of pavement best suited for New York and particularly the laying of the asphalt binder course and wearing surface over the old granite blocks and macadam pavements, utilizing the old pavements as foundation for the new pavement surface. Gen. Collis also recommended and put in practice a modification of the European custom with respect to maintenance, under which the City of New York exacted a maintenance guaranty for a period of fifteen years, thirty (30) per cent of the contract price to be retained from the contractor. No part of the maintenance fund thus provided was returned during the first five years, which was regarded as a free guaranty period, but, after the expiration of the five year period, one-tenth the retained money was paid to the contractor each succeeding year in consideration of the maintenance, which it was presumed the pavement would require. Without the necessity of, and probably without combination, contractors naturally added the maintenance percentage or more to what had been the previous customary prices under the five year "guaranty" custom. In fact it was understood that the plan adopted was intended to provide a fund for "maintenance" as well as construction. Note the terms "guaranty" and "maintenance" are not used synonymously.

As herein used the term "guaranty" means warranty without charge that defective materials have not been used and that the work was properly done, and does not contemplate that repairs will be necessary; while "maintenance" carries with it the idea of an allowance to cover the cost of repairs during the period of maintenance.

In cases of light traffic streets on which the maintenance fund was sufficient or yielded a profit to the contractor, the plan worked out quite satisfactorily to the contractors, who promptly made necessary repairs and there was no cause for complaints by the city. In some other cases the integrity or commercial interest of the contractors prompted them to spend in repairs sums considerably in excess of the maintenance fund. In many other cases, however, the contractors maintained the pavements so long as it did not entail a serious loss, but when, as the pavements grew older and the cost of repairs correspondingly greater, they quietly abandoned the work and left it to the city to expend the balance of the maintenance fund and when that was exhausted to otherwise provide for repairs. Consequently, in about the year 1902 no less than six previously supposed-to-be responsible contractors repudiated their maintenance obligation and, after expending the balance of the maintenance fund, the City of New York found the fund to be hundreds of thousands of dollars short of the amounts required to make necessary repairs during the balance of the maintenance period, with no adequate means of enforcing the maintenance contracts.

During the period beginning about 1892 several new sources of supply of asphalt were developed and new, inexperienced asphalt paving companies were organized to exploit the new materials. In order to "prove the superiority" of,

as well as their promotion faith in the new materials, their promoters quite generally adopted the policy of offering ten year "free guaranties" and boldly argued that because the new material was guaranteed twice as long as the old, it was superior to its older competitors.

Taxpayers and officials so generally "fell for" this fallacious argument that the older and more responsible asphalt paving companies were forced to extend their guaranties to meet the new form of competition. Surety companies about the same time became quite numerous and, keen for business, readily issued bonds under the new conditions. Thus by about the year 1897, ten year guaranties became the general custom.

This worked out with apparent satisfaction until the period arrived when pavements began to require maintenance repairs. Then real troubles began. Again the integrity of the guaranty in each case generally depended sometimes on the commercial interest and sometimes on the financial ability of the contractors to keep the pavements in good repair. In many cases the contractors would, almost without protest, make repairs for which they were neither legally nor morally responsible, the causes of the trouble being through neither fault of the contractor nor inferiority of materials used. Some of the fruitful causes of such failure which were out of the contractor's proper responsibility and control were:

a. Insufficient drainage on foundation provided by the city specifications.

b. Poor street railroad construction causing vibration and breaking up of the pavement.

c. Settlement of trenches for underground service pipes.

d. Improper system of cleaning the pavements, including excessive flushing and sprinkling.

e. Leaky gas mains, and less frequently leaky water mains, causing disintegration of the pavement.

In many cases, however, the contractors would avail themselves of such conditions and even exaggerate them as a reason for refusal to make repairs when directed by the city and would resort to every means known to the law to avoid such payment.

Surety companies, even though fully indemnified, were powerless to "make good" because the Surety Company liability does not begin until the contractor's liability is legally fixed. The contractors contested their liability and the cities had no means of enforcing the guaranties except at the end of law suits, in which legal contests the cities would generally lose. In the meantime the pavements would get from bad to worse and a bond was found to be a very inefficient way to get poor pavements made good. In fact, it may be fairly stated that a good pavement was very seldom, if ever, secured by the enforcement of a guaranty bond. On the other hand, many contracts were let to inexperienced contractors, using experimental materials, at unprofitable prices, on the theory that "the city is fully protected by bond," an argument which would almost universally prevail as against higher prices of more experienced and therefore more responsible contractors. I here use the word "responsible" in its broadest sense and not limited to financial resources.

As in most lines of trade, the seller who has the poorest, least certain and cheapest article to sell, talks the most about his "guaranty" and the least about the merits of his goods. You consider the purchase of the cheapest watch, and it is pretty certain that the seller will expand on the one-year guaranty. You look at a hundred dollar watch and the seller tells you all

about its hand-made Swiss movement, jewels and other fine points, and says nothing about guaranty. You ask about guaranty and learn that it is for one year, the same as the dollar watch. In both cases the guaranty really means simply that you get a guaranty of perfect mechanism of its kind with no thought of maintenance involved.

In the case of pavements, in the past to a large degree and even at present to a much less degree, it is a popular impression that the term of guaranty bears a ratio to the integrity and durability of the product and consequently the seller of a cheap, inferior pavement talks a lot about the term and integrity of his guaranty and little about the integrity of his pavement. When you buy a hundred dollar watch you don't expect a hundred year guaranty because the dollar watch carries a one year guaranty. And yet it is often fallaciously said that if one pavement costs twice as much as another it should be guaranteed for twice as long. The term of guaranty is not and should not be understood to be as the life of a pavement. The "guaranty" should not carry the idea of "maintenance," but should cover the use of proper materials and integrity of construction for a sufficient time for avoidable error or defects on the part of the contractor to develop under traffic and climatic changes. More than this breeds insecurity and trouble.

Guaranties should only be required for a sufficient length of time to enable competent officials to know that proper materials had been used and the work executed in the proper manner, and, as it is known that no character of street construction can be expected to last indefinitely, all cities should be thoroughly equipped with plant of sufficient capacity for the proper maintenance and repair of streets as soon as they commence to deteriorate, and in this way almost

every character of improvement could be made to last very much longer than if the repairs are neglected. Thus equipped on the theory of "a stitch in time," etc., cities can secure maintenance far more economically than through guaranty or maintenance bonds.

The requiring of guaranties has contributed towards lack of inspection by the cities, and in some instances has placed the contractor in the position either of refusing to proceed with the work on the ground that the ideas and instructions of the engineer would not accomplish the end desired, or else notifying the city that if he followed the instructions of the engineer the contractor would insist that he be relieved from the obligations of his guarantee bond.

One recent case of the insufficiency of a "good bond" to make a "good pavement" out of a poor one well illustrates the principle. In the year 1908 a prominent city awarded a contract to a supposed-to-be responsible contractor, who has since gone into receivership through the all too common practice of meeting competition by bidding the prices below cost of construction and necessary proper operating or "overhead" expenses. A "good bond" was given to insure a guaranty of ten years. Repairs were necessitated within two years and for a time the contractor made the necessary repairs, but later failed to do so and still later passed through receivership. The surety company could not legally make repairs and recover from the receiver or indemnitors until the courts had fixed the contractor's liability. The street deteriorated from bad to impassable and required resurfacing. In April, 1914, with four years of the guaranty still in force, the council of the city directed the city engineer to resurface the street, and appropriated the sum of \$12,000 for the purpose. It

is presumed that a law suit will follow to fix the responsibility of the surety with the likelihood that the courts will decide the guaranty to be illegal.

LEGAL.

In many complicated and apparently conflicting decisions which naturally followed the state of affairs outlined in the foregoing historical statement, the Courts have generally decided that, on assessment work, *i. e.*, cases where the whole or any part of the cost of pavements is assessed on the abutters, it is not legal to require a guaranty *for a period longer than the reasonable life of the pavement without repairs*. In other words, if the guaranty carries with it an obligation of maintenance, an assessment on the abutters is illegal because it charges them with cost of maintenance, which maintenance the laws generally provide shall be paid for out of the general funds of the city.

The charters of a very large proportion of the cities of the United States and Canada provide that a portion or the whole of the cost of new pavements shall be assessed on the abutters, and the maintenance thereupon to be paid for by the city at large.

The doctrine is tersely stated by the Pennsylvania Supreme Court as follows:

PHILADELPHIA V. PEMBERTON, 208 Pa. 214, 1904. The contract provided that the contractor "Keep the street in good order and repair at the finished grade for at least five years after the same shall have been paved and thrown open for public use." "The kind of pavement to be constructed and the character of the work to be done are matters within the discretion of the municipal authorities, and it is competent for them to secure the proper performance of the contract by a guarantee of permanency of the work, if in so doing they do not impose upon the property owner more than the cost of the original pavement,

constructed in strict compliance with the specifications. * * * * Unless the time for which repairs are to be made is so unreasonable as to indicate an intention to impose the cost of maintenance upon the abutting owner, the provision for repairs will be regarded as a guarantee of compliance with the contract for paving."

The Supreme Court of Iowa in 1897 delivered an opinion from which the following is quoted:

OSBORN V. CITY OF LYONS, 104 Ia. 160. "The provision in the contract that the contractor guaranteed that the pavement should, except for excavations," etc., "remain at the end of five years in as good condition in all respects as when completed and as required by such specifications," and should "be and remain good, substantial, reliable and durable pavement in material and workmanship as a whole and in all its parts, except ordinary wear," and that the contractor would make necessary and proper repairs during said five years, did not invalidate the contract. The city, to be sure, and not the abutters, was by law required to pay for repairs to its streets, but in this case the contractor was liable not for defects and repairs due to excavations, etc., and not for ordinary wear. It was not a contract to repair for five years, but a guaranty of quality and durability.

The Illinois Supreme Court has similarly decided and used the following language:

LATHAM V. VILLAGE OF WILMETTE, 168 Ill. 153, 1897. "The specifications provide that the contractor shall, without any extra compensation, keep in repair said curb and gutter for a period of two years after its final acceptance, by making good any settlement or derangement of lines or grades of curbs, gutters and crossings and by replacing defective materials or work in curbs,

gutters, crossings, and pavements. This specification is no more than a guaranty that the work has been properly done, and the contractor makes the agreement to repair if defective. In estimating the cost of the improvement the commissioners did not take into consideration any cost of repairing, and this requirement was reasonable and proper. *Cole v. People*, ex. rel. 161 Ill. 16."

THE CASE OF PEOPLE EX. REL. HALL v. MAHER, 9 New York, Supplement 94, Supreme Court, 1899: "The Charter of the City of Albany provided that the repairing of streets should be charged upon the city. An ordinance to pave Delaware Avenue directed that the contract should require the contractor to agree to keep the pavement in repair for seven years without expense to the city or abutting property owners.

"It was held that the contract was void since it threw upon the property owners the expense of keeping the pavement in repair, whereas such expense was chargeable only upon the city. * * * a further argument is made, viz., that since 1883 every contract of paving has required the contractor to keep the pavement in repair for a year. *But this may reasonably be considered a time within which to test the pavement. Defects in the construction may not appear immediately and this time of one year may be proper, in order that any such defects may become apparent.* * * * It is not subject to the objection made by the relator, being in substance only a security for the thorough completion of the work, and unobjectionable, so far as we can now see. * * * It is the duty of the city to make the repairs. But by this contract they make the property owners liable to pay, not only for the laying of the pavement, but for making repairs for seven years. Every contractor was obliged to agree to these terms. The city, therefore; compels the property owners to pay the

contract price, not only for laying the pavements, but for the seven-year repairs. This it has no right to do; and it cannot make such a proceeding valid by testimony that the contractor did not include a charge for repairs in his bid. If, as the contractor claims, no repairs will be needed, then there was no need for such a clause. Evidently the city thought repairs might be needed, and arranged that the property owners should pay therefor in advance. They have a right to insist that the specifications for which proposals are to be made, and the contract entered into thereon, shall be limited to that work which they are bound to pay, viz., the construction of the proposed work, as distinguished from subsequent repairs. The decision of the board is reversed, and the contract adjudged illegal. All concur."

CITY OF COVINGTON v. DRESSMAN, 6 Bush. Ky. 210, 1896, Court of Appeals. Suit by contractor against lot owners and the city to recover an assessment for street paving.

The covenant by the contractor to keep the work in good order and repair for the period of one year after it was approved was held in *LOUISVILLE v. HENDERSON*, 5 Bush. 515, under the evidence in that case, to mean simply a guaranty that the work was well done, and if so it would need no repair within that time. "It is certainly not a felicitous way of expressing a guaranty for sound, good work, yet that may be what it means; at least it would be so presumptively held on demurrer, when, if such is not the case, this may be put in issue and elucidated by the evidence; and on trial, *if it should appear that this imposes an additional burden on the property holders, and is not a mere guaranty by the contractor that he will well perform his work, they should to that extent be released; for it is the duty of the city to keep such streets in repair, and*

not impose this on the property holders."

The responsibility of the city for the sufficiency of its plans and specifications to provide a construction which will comply with the requirements of the guaranty is fixed by the United States Supreme Court as follows:—(District of Columbia vs. Clephane, 110 U. S. 212, decided in 1883).

"Even if it be conceded that defendant was bound at all hazard to keep his pavement in repair for three years, or pay the District Government for so doing, this meant repair, not a new pavement; such repairs as that kind of pavement was capable of and not a new and much more expensive one to be laid at his cost.

"But we concur with the Court below, that the defendant did not contract for the perfection of his work for three years, nor that he would keep it good for that time.

"His contract was to lay the Miller wood pavement. Of the capacity of the pavement for resisting weather and use the Board of Public Works, and not he, took the responsibility. All his material was submitted to the inspection of the plaintiff's engineers, and all his work was done under their eyes, and he could only receive his pay on their certificate of work done and inspected.

"The language of his agreement is, that if any parts thereof, that is, the pavement, 'shall become defective from imperfect or improper material or construction,' he will repair.

"No evidence was offered that any of the material was imperfect or improper when placed there, or that any of this construction was improperly or defectively done. We think this was necessary to enable plaintiff to recover. It will not be presumed, because the work needed repair within three years, that the material furnished by plaintiff was originally im-

perfect, or that the construction was not well done.

"The pavement may have become defective from improper and rough usage, from permitting water to stand on it and produce decay."

This doctrine of obligation on the part of the city to specify a construction which can reasonably produce the results required by the guaranty is forcefully stated by the New York Court of Appeals in *MacKnight Flintic Stone Company vs. New York City* (160 N. Y. 72, 1899), from which the following is quoted:—

"The City of New York advertised for bids for making a water-tight boiler room and cellar under plans and specifications prepared by the city engineer. The contract provided for an inspector and that all materials adjudged improper or not corresponding with the specifications should be removed and replaced and defective work done over. There was water pressure from below. The specifications provided for a layer of concrete, steel beams, brick walls and layers of felt. The contract also provided that the work 'should be guaranteed absolutely water and damp proof for five years from the date of the acceptance of the work.' No objection was ever made to any work or materials and evidence was given showing that the plans and specifications were literally complied with. After the work was done the cellar was dry. * * * Soon after dampness appeared and water oozed through to some extent. The plaintiff asserted that owing to the water pressure from below the room could not be made absolutely water-proof without adopting a new method. There was some evidence tending to show that part of the materials required by the specifications were of improper pattern and that a water-proof condition could not be produced

by following the specifications. Numerous cases were cited in the briefs of counsel.

"The Court said, if the guaranty meant that the plaintiff agreed to make the boiler room tight by following the plans and specifications, even if it could not be done in that way, it agreed to perform an impossibility, but if the meaning was it agreed to make the room tight by following the plans and specifications provided it could be done in that way, it has performed its contract. The rule of reasonable construction of this contract must govern. It did not require the construction that the plaintiff guaranteed the sufficiency of the plans and specifications to produce the result desired. * * * It would not be reasonable to hold the parties to have intended that the plaintiff was to do a great deal of work and furnish a large quantity of materials according to the specifications of the defendant and under the direction of its officers, with no right to vary from the materials or construction specified and yet get no pay for it unless it produced a certain result. * * *

"As to the five year guaranty clause, the Court said this applied to the materials and workmanship, but not to the plan. 'It has reference to what the plaintiff was to do, not to what the plan would accomplish, and is predicated on the efficiency of the plan. The plaintiff was to execute the work according to the plan and to turn it over in perfect order, but to guard against latent defects he was required to protect the defendant against them for the period named. Any defect owing to poor workmanship or bad materials was to be made good. * * * It required something to be done in the future provided it became necessary, not on account of a defective plan, but of defective

execution. * * * It was not a guaranty of the perfection of the plan, but of the materials and workmanship, and its effect was to make the plaintiff responsible for dampness or water breakage caused by such defects only.'"

The Supreme Courts of some states have decided that *any* term guaranty in a contract for paving, the cost of which is to be assessed on the abutters, is illegal, and that if any guaranty is desired of the contractor it must be in a separate contract and covered by separate bid and remuneration to be paid for by the city at large.

The Supreme Court of Alabama (Montgomery vs. Barret, 149 Ala. 119) in opinion rendered in 1907 forcefully states this doctrine in the following extract:—

"The advertisement stated by order of the City Council, 'All bids to be of 10 years guaranteed maintenance.' * * * The act under which the bonds for paying for the work were authorized did not provide for making any contract for future maintenance, but stated that the proceeds of the bonds should be applied 'only to the paving or improving designated in the ordinance providing for their issue.' The ordinance here provided that the cost should be assessed to the amount the property was benefited. 'Well considered cases hold that where a city is authorized to contract for paving its streets it has no authority to incorporate in the contract an agreement for future maintenance.' The contract here was an entire contract. The ordinance provided that the city would issue bonds to pay for the improvement. It was impossible to tell what part of the contract price was for paving and what part for future maintenance; therefore the city had no power to make this contract and use the proceeds of the bonds in the manner proposed."

Other prominent decisions sustaining this doctrine are as follows:—

PORTLAND VS. BITUMINOUS PAVING Co., 33 Or. 308.

FRIEDMAN VS. VILLAGE OF NORWOOD, I. C. C. R., N. S. 9 Ohio.

SCRANTON VS. STURGES, 202 Penn. 182 (Sup. Court 1902).

WILLIAMSPORT VS. BECK, 128 Penn. 147.

VERDIN VS. ST. LOUIS, 131 Mo. 26.

WILSON VS. TRENTON, 61 N. J. L. 599 (Court of Errors and Appeals, 1898).

BROWN VS. JENKS, 98 Cal. 10.

FENLER VS. GOSNELL, 99 Ky. 380.

BOYD VS. MILWAUKEE, 92 Wis. 456.

In conclusion of this phase of the subject, it will be noted that, in many cases, the Courts have held that a guaranty for a term of five years is reasonable, as not carrying with it a contract for maintenance, provided that the wording of the guaranty or warranty is in itself such as to include maintenance. Of course the longer the term of guaranty specified the greater the danger of illegality. As indicated above, some courts have denied the right of requiring any guaranty on assessment work. Others have prohibited more than one or two years. Terms greater than five years have been quite generally declared illegal. The following from the Appellate Division of the New York State Supreme Court is to the point:—(Bradshaw vs. City of Jamestown, N. Y. 125 N. Y. Ap. Div. 86).

"The abutting owners are required to pay for the pavement upon the basis of the contract price. The contract specifically requires the contractors to make the repairs made necessary, not only because of defective material and workmanship, or by natural wear and tear of traffic, but by the action of the elements as well, and that for a period of ten years. Apparently, this puts an additional burden upon the abutting

owners. If, as a matter of fact material of the best quality and workmanship of the best kind, would last for that period of time, under the conditions stated in the guaranty, it was incumbent upon the part of the city to establish that by proof, although it is difficult to see how all the repairs made necessary by the action of the elements would necessarily be chargeable to bad workmanship and material."

UNEXPECTED CAUSES OF REPAIRS.

Another important feature of pavement guaranties is the one of attempting to hold a contractor under his guaranty for such unanticipated conditions as settlement of trenches not made or backfilled by the contractor; improper cleaning on the part of the city; insecure railroad construction, improper drainage, leaky gas and water mains, etc. The opinion of the Supreme Court of Kentucky covers this point in the following language:—

(LINDSEY V. DRAWNER, 97 S. W. 1, 29 Ky. Law. Rep. 1236).

"By a street paving contract the contractor guaranteed that the material and workmanship should be first-class in every particular. He further guaranteed that he would keep the street in good repair for five years and restore and repair at his expense any defects appearing in said street within said time. *HELD, that such clauses should be read together and only obligated the contractor for such repairs as were made necessary by the defectiveness of the work and materials, and not from unexpected causes.*"

I am indebted to a publication, "Pavement Guaranties—Their Use and Abuse," being a report to the Newark, N. J., Board of Trade, Dec. 11, 1907, by Col. J. W. Howard, C. E., E. M., for a portion of the extracts from legal decisions quoted above.

(CONTINUED IN THE MARCH ISSUE)

ADDITIONAL REPORTS OF MUNICIPAL PROGRESS.

In the last issue a large number of municipalities reported their principal achievements during 1915. In addition to those published, the following reports have been received:

GILROY.

Foremost among the improvements inaugurated by the City of Gilroy during the year 1915 has been in the improvement of her fire fighting facilities and that department in general. There is now in transit from the factory of the American La France Fire Engine Co., of Elmira, N. Y., a \$5,000 combination chemical and hose wagon. The Game-well Fire Alarm Tel Co. holds the contract to install a modern fire alarm system at a cost of \$2,000.

In the matter of bridgework the city has in course of construction under contract an additional span to the I. O. O. F. Avenue bridge, which will involve an expenditure of at least \$1,900.

Preparations are now well under way for the installation of one of the most modern street lighting systems for Monterey Street and the business district. It is to be a luminous arc system similar to the one installed at the P. P. I. Exposition, and will comprise approximately fifty electroliers, Staggard 87½ feet and the cost thereof has been estimated at \$5,000.

E. F. ROGERS,
City Clerk.

SAUSALITO.

During the year of 1915 the Town of Sausalito spent \$134,000 on public work. \$100,000 of this was expended on a concrete, brick and asphalt pavement extending from the southernmost limit of the town, at the gates of Fort Baker, through the commercial center to the

northerly boundary, where it joins the State Highway, a length of 2⅜ miles.

The pavement at the north end consists of a 1½" Topeka asphalt wearing surface over a 5-inch concrete base. At the south end vitrified brick was used on grades over 6 per cent.

The contract for grading on the north end was let separately from that for paving and was awarded to Eaton & Smith of San Francisco. Clark & Henry of Stockton did the paving for the entire roadway.

During the last year sewer work has been steadily proceeding so that the end of 1915 finds the entire town, with the exception of the south and central portions, adequately sewered. One sewer district, comprising \$11,400 worth of work, is in the hands of W. J. Tobin of Oakland, who will complete this work within a short time. Plans for the remainder of the town are awaiting the action of the Board of Town Trustees.

A minor contract for grading, a retaining wall, and bridge, has been let to the Engineering and Construction Company of San Francisco, for \$00,000, and is under way.

An electrolier system extending for nine-tenth miles through the commercial center of the town has been completed and is in operation. The contract for laying the conduits was let to the Contra Costa Construction Company of San Francisco for \$1,100, and that for installing the electroliers, to the Pacific Fire Extinguisher Company of San Francisco for \$2,717.00.

Plans have been made and more are in the hands of the engineer, for about three miles of business and residential streets. Concrete, asphalt macadam, and bitucrete pavements are under consideration. The problem of steep grades and drainage, the desire for a permanent pavement, and the necessity for good traction complicate the choice.

A hillside pavement described on page 1164, Vol. 75, Engineering News, as in use in Birmingham, has met with quite a little favor. In this type of pavement, the surface is divided into transverse strips which are tilled so that shallow L shaped valleys are formed in the street and action is afforded by the butting of the horses hoofs against the short leg of the L.

In dealing with drainage a policy of keeping such obstructions as inlets and outlets off the street is contemplated. Wherever possible water will be carried under the curb. This policy has been the cause of the development of some novel forms of drainage structure.

In order that the more generally useful of these structures may come within the scope of the notoriously small purse of small towns, efforts have been made by the Engineering Depart-

ment of Sausalito to institute a set of "Small Town Standards Castings." The engineers of some of the neighboring small towns, the foundrymen, and the League of Pacific Municipalities have been approached with this idea.

W. Z. TIFFANY,

Town Clerk.

The American Well Works of Aurora, Ill., are calling attention to their centrifugal pumping plants which they claim is practically automatic and absolutely fuel proof, requiring attention but once or twice a day.

The Lansing Company of Lansing, Mich., claim that eight Lansing Mixers beat the world's record for concrete construction on the Sheepshead Bay Speedway job, which was completed last July.

WE ARE IN THE MARKET FOR MUNICIPAL BONDS

ALSO FOR IMPROVEMENT BONDS ISSUED
UNDER THE NEW CALIFORNIA

"Improvement Bond Act of 1915"

LUMBERMENS TRUST COMPANY

OF PORTLAND, OREGON

CAPITAL AND SURPLUS \$600,000

GILBERT W. SMITH,
Manager San Francisco Office

511 Insurance Exchange Bldg.
SAN FRANCISCO, CAL.

CORRESPONDENCE SOLICITED

Mention "Pacific Municipalities" when writing for catalogs.

Methods of Assessing Property

Taxpayers, that is the ordinary run of them, find a certain degree of satisfaction in finding fault, "kicking" as the slang is, at the tax rates. That is, they get whatever satisfaction comes from such kicking, which isn't much, for the tax rate sticks and goes up a little next year.

The ordinary taxpayer finds fault with the tax rate because it is about the only visible thing to find fault with. We can't kick invisible things because it is a painful process; it is like trying to hit something that isn't where we thought it was. The jar is to our own system rather than on the object we sought to reach.

So, to repeat, the average taxpayer takes a fling at the high tax rate because it is the only thing in sight. He feels as though he had been hurt about taxpaying time and thinks that it was the tax rate, when, as a matter of fact, it wasn't the tax rate that hurt him, but something else that happened long before the tax rate was in evidence.

Where the taxpayer was hit was when his assessment was made and his injury, if he has one, while he did not find it out till taxpaying time, was really inflicted a long time previously.

He didn't know at the time his assessment was made that he was going to be hurt—in fact he thought that he was getting off easy because—yes—because he knew that his property was under-assessed. He knew that the assessor never assessed his property for all it was worth—at the full cash value as the law requires—so he considered that the assessor was doing him a favor like a personal friend. He couldn't kick at that and he didn't see the whole assessment roll—that was too big a

thing to see; it wasn't visible and to repeat an aphorism, we can't kick at things we can't see.

If, however, the assessor had obeyed the law and had fixed the value of the taxpayer's property at all it was worth, then Mr. Taxpayer would have sat up and taken notice. He would have been on the job, so to speak, and he would have seen to it that he was not over-assessed, and that the assessor (who was not his friend any more) had not under-assessed his neighbors.

It is safe to say, that there will not be any reform in taxation until the average taxpayer begins to concern himself in the matter of assessment of property for purposes of taxation; and he will not commence to do that until his assessment approaches close to one hundred cents on the dollar.

The Secretary of the League thought, just as a matter of curiosity, he would try and find out whether any progress was being made in taxation matters and so sent out a circular to city assessors asking a report as to their method of making assessments, and particularly as to whether they had adopted any new or novel method as to determining the value of property.

Of course, it was not to be expected that any startling discoveries would be made. City and town assessors are handicapped, because if they depart any from the usual way of doing things and the property—their cities show increased value, the county assessor is likely to take the values, and shut his eyes to the method and when it comes to the imposition of county taxes the city taxpayers are penalized.

So, in the replies received to the circular, there were only a very few re-

the property owners are paying as nearly as may be their just proportion of taxes.

H. L. MOODY,
City Assessor.

GLENDALE ASSESSMENTS.

Numerous scientific methods have been suggested and submitted by bodies of men organized for the purpose of systematizing methods of making tax levies, but as yet our Board of Trustees have not taken up any of them.

I have assessed this town for the past five years, taking, possibly, an average of 45 per cent of actual values of the real estate and as much of the improvements, as a basis of fixing taxable values. As to personal property, it has largely been left to my judgment what shall be properly assessable, the intention being to go very lightly on household goods and other necessary movable property. There has been no protest of any kind against any of the assessments for the past four years.

However, I am inclined to believe that sooner or later our Board of Trustees will take up one of the systems now in vogue and will aim to deal with the subject in a more scientific way.

G. B. HOFFMAN,
Deputy Assessor and Tax Collector.

ASSESSMENTS AT FORTUNA.

Do not think the manner of ascertaining the value of property for assessment purposes as used in this office contains any novel or unusual method.

The method as used is this: The last year's roll is copied on the new year's assessment list, making such changes as have been made in the ownership since the last assessment. Each owner is then visited and shown the list. Any corrections to the list of personal property is then made at that time. The lists are then copied onto the assessment

roll. The manner of ascertaining the value of real property has been this: The principal business center of town has been taken as a standard. The advice of the leading real estate men, bankers, and business men as to the market value of this section has been secured and a basis formed from the information obtained. Land on all sides of this center have been graduated to a valuation consistent with the location to this center. Assessments bear a valuation of about 65% of the actual cash value as ascertained in this manner. This seems to work out with fairly good results as far as land values are concerned, but when it comes to personal property it is a different question. * * *

I have often thought that the present method of assessment of all kinds of personal property is very crude and that some uniform method should be devised for a more equitable assessment. For instance the county assessment on property inside the corporate limits, and outside for that matter, will hardly average 50 per cent of the town assessment based on a 65% valuation of the actual cash value. This makes an added hardship on the town assessor to explain the reason of this difference.

Surely some method could be devised that an assessment could be made uniformly and justly to all concerned and I hope that the information that is obtained from this questionnaire will show up the present crude methods in such a manner that public sentiment will demand a better method.

GEO. R. LANE,
Town Clerk.

PALO ALTO ASSESSMENTS.

Palo Alto uses a modified form of the Somers system in fixing land values. When this system was put in force a committee of the city council and the city assessor made a careful study of

land values, finding the prices at which lots had sold in a given locality, where conditions were equal, and fixing a basis value per front foot. Different localities in the city were studied separately. The assessed value was an estimated 60% of the full value of the land. The basis of value was made on a depth of lot of 100 feet. Corner lots (50 feet in residence section and 25 feet in business section) were given an increased value of 10%. The additions for a depth of lot over 100 feet were fixed as follows: 105 feet, 3%; 112½ feet, 7%; 125 feet, 10%; 150 feet, 15%; 200 feet, 20%. The basis figures were placed on a map of the city and used in estimating lot values. The figures are revised from time to time as changing conditions may demand. This system has been in use for five years and has given good satisfaction, it being generally recognized that the purpose is to make the assessment as nearly equal as is possible.

In fixing the value of improvements, two members of the city council, who are building contractors, and the city assessor visited every building in the city and estimated its present full value. These values were placed on an insurance map and are used in fixing the assessed value, giving a permanent record for use in figuring depreciation, etc. At present the city assesses improvements at 40% of their full value.

The assessment of personal property is as much of a farce in Palo Alto as it is elsewhere.

FRANK KASSON,
City Clerk and Assessor.

ASSESSMENTS AT ALAMEDA.

The assessment rolls of the City of Alameda and the system of assessing are noted for being modern and equitable. During the last eight years there have been over sixty-five thousand separate assessments made, which have been

upheld by our local Board of Equalization.

The assessment rolls are made up of values on real estate, improvements and personal property, and the following data will show how values are arrived at, and the method of carrying on the office work.

In assessing of real estate, we are guided by a large map of the city divided into four parts, which show all the streets and their assessment value per front foot. This map shows the width of all streets and those that are improved are shown in red ink. Whenever there is any doubt about the values of real estate, the Assessor gets in touch with the different real estate men in the town and the correct values are soon established.

We are at present assessing real estate at its cash value, that is, we get the price that the property is listed or quoted by the real estate men and take 70% of that and consider it a fair cash value, allowing 30% leeway for being too high.

Improvements are assessed at 50% of their cost, the original figures being obtained from the records of the building inspector.

The assessing of personal property, as every one knows, is rather a difficult proposition, but our aim in this work is to be fair and equitable.

I might add that, in this connection, we have established an up-to-date method of assessing automobiles by use of the card system. The Alameda automobiles are selected from the Secretary of State's report and listed in our office, and notices mailed from this list. After all the returns are in, the statements are posted on these cards, and when the cards are completed, they are posted in the assessment records and checked.

These cards are arranged alphabetically and the assessment of any auto-

mobile can be found very easily. They also indicate the name of the owner, address, assessor's block, make of the machine, number, model, year made, and can be used as long as the owner keeps the car.

F. J. CROLL,

Auditor and Assessor of the City of Alameda.

COMPARATIVE STATEMENT, SHOWING PERCENTAGE OF LAND VALUES AND IMPROVEMENTS IN THE PRINCIPAL CITIES OF CALIFORNIA.

San Diego offers exceptional inducements to the home-builder and manufacturer by reason of the low valuation on improvements as per the following tabulation:

CITY.	Assessment of Land.	Percentage of Value.	Assessed Value of Improvements.	Percentage of Value.
San Francisco.....	304,661,024	.50%	165,556,757	.50%
Los Angeles.....	232,269,224	.50%	134,967,415	.50%
Oakland.....	82,418,900	.50%	44,994,300	.50%
Sacramento.....	43,047,200	.72%	19,503,930	.60%
Alameda.....	10,884,200	.70%	7,406,550	.50%
Long Beach.....	20,497,125	.50%	7,707,845	.50%
Santa Barbara.....	4,682,080	.60%	4,116,820	.60%
Bakersfield.....	3,278,735	.50%	3,319,505	.50%
Pasadena.....	29,156,970	.66 $\frac{2}{3}$ %	16,917,595	.66 $\frac{2}{3}$ %
Riverside.....	4,531,995	.33 $\frac{1}{3}$ %	3,818,050	.40%
Eureka.....	5,405,800	.40%	2,121,925	.33 $\frac{1}{3}$ %
Berkeley.....	25,680,565	.70%	14,877,750	.60%
San Jose.....	44,615,425	.60%	23,118,415	.50 to .60%
San Diego.....	73,329,930	.60%	6,167,590	.15%

Compiled by H. L. MOODY,
City Assessor, San Diego, Cal.

MOUNTAIN VIEW ASSESSMENTS.

Early in 1914 the Clerk was instructed to request three of the leading real estate dealers of the town to place a fair valuation on the corner lot of each block and also on a lot midway between corners.

After these reports were received the Board of Town Trustees, together with the city attorney and assessor, examined the lists and after making some changes adopted the one which seemed nearest correct.

The real estate was then assessed at 80% of valuation as thus established. Improvements were assessed at about

60% of valuation and personal property the same.

It might be stated in addition to the foregoing, that the effect in increasing the land values and allowing improvement values to remain stationary was a reduced tax rate which benefited nearly every resident of the town. The owners of vacant lots (mostly non-residents) paid more of the town's taxes.

S. A. WINNEGAR, Town Clerk.

ASSESSMENT AT PASADENA.

With reference to ascertaining values of property for assessment, our methods are no different than elsewhere.

This office keeps a record of all sales and transfers of property by information given us by the various real estate

dealers, by advertisements, giving values and by inquiry. We make adjustments in proportion to such information at hand and our values are based on 66% of real value. No great changes are made, but by careful adjustments these changes are not overbearing and there are few complaints.

The taxpayers here are requesting many improvements and are favoring bond issues, therefore by direct taxation we are using \$50,000 for outlays that most cities would have to bond themselves for every year—bridges, fire apparatus, land purchase, parks, etc.

There is need of new ways of making up assessment rolls, and each city has some feature along the line of field books, maps and tax rolls, also receipts of minor importance.

I have often thought that a tax roll could be made to last several years in place of new rolls every year. Large tracts once laid out don't often change and lots are only here and there split. For small cities a tax roll can be so arranged as to cover five or more years. Our map books are arranged to cover eight years. When you want to find the owner, at a glance you can see any change in name, or value of land, or the value of improvement, all along the same line, with the map on the opposite side of the page. By adding up the 1915 columns, you have the assessed value of all the property on the map in front of you.

Now it seems to me that some new way of maintaining an assessment roll for several years can be thought out. A great deal of time is being used for writing the descriptions of property each year on new tax rolls. Why not open a ledger account against each lot. The only, or most important changes, are the owners name and address.

Have all descriptions, except long descriptions, put on rubber stamps, as (Alhambra Acres, as per Bk. 12, P. 20, Map Record, L. A. Co.) Now if there are 20 or 30 lots in this tract, you would certainly have to write this description 40 or 60 times—once on the roll, once on the tax bill. By using this stamp and arranging your tax roll by tracts is a labor saving feature. First use the rubber stamp for field books, next for tax rolls, then for tax receipts, next on tax sales, and tax sale book. Also, may be used by the tax collector for listing tax sales for advertising, to the printer.

Pasadena has arranged, in conjunc-

tion with the Joint Bureau of Appraisal of Los Angeles City and Los Angeles County, to use the values made by this new Appraisal Board, for our city assessments. This will make our values the same as the county values, only the percentage base will not be the same. As our revenue percentage was 66% and the county was 50%, it may be necessary to make our values for revenue 70% of the real value of property for taxation.

The Appraisal Board has reduced our former values, and until the appraisalment now under way is finished, it will be unknown just what the total will be. I am sending you enclosed, slips showing method of buildings being appraised.

The whole outline is somewhat on the Sommers system, for the whole of Los Angeles County, Los Angeles City and Pasadena joining in.

I would like to see passed a law that personal property should not be assessed—that all deeds of record must show the full amount of cash value in the transfer of property. The recorder listing all changes to the assessor in such districts where transfers are recorded. Deputies in the field every year could be dispensed with, the address of the owner could be taken by the assessor from the tax stubs. The last deed of record is sufficient for statement of ownership, to the assessor, and the whole arrangement would be more correct than our present record of having several hundred "unknown owners" every year to list on our tax rolls.

As to getting values on property, we have kept ourselves constantly informed through transaction of sales, and property listed for sale, and adjustments are made in the territory where such information is at hand. Advertised property is not always correct, and

newspaper transactions are of some value if followed up on property advertisements.

No great changes have been made on raising assessments. Our appraisement is high, and when we say two-thirds value, we are not far off. In the past two years I have paid more attention to unlisted personal property, stocks, and bonds of considerable value.

When you ask for detail in making up our assessments, I can't say that they differ much from methods in use elsewhere. We follow our charter provision.

Any further information we will be pleased to give you on request.

J. W. PRINZ,

Assessor.

LOS ANGELES JOINT BUREAU OF APPRAISALS.

The most advanced step that has been taken in the State with a view of having a just system of assessment is the creation of a Joint Board of Appraisal. This board was created by ordinance of the Board of Supervisors and of the City Council, for the purpose of unifying tax assessing methods throughout the City and County of Los Angeles. A new and complete reappraisal will be made of all real property in Los Angeles County.

By the terms of agreement, as set forth in the resolution and ordinances adopted and passed jointly by the County Board of Supervisors and the Los Angeles City Council, funds for carrying on the work within the corporate limits of Los Angeles City have been provided, each body setting aside an equal amount. Both County Assessor Hopkins and City Assessor Mallard will use the values obtained by the Joint Bureau of Appraisal as the basis for their assessments for 1916-17.

To enable the county assessor to

make his county assessment uniform on real property outside Los Angeles City, and based on similar methods of obtaining values, the County Board of Supervisors has set aside additional funds, and the same uniform methods are being applied throughout the county.

OTHER CITIES JOIN IN WORK.

This bureau was created in order that not only Los Angeles City, but all other cities within the county making their own assessments could, if they so desired, join with the county in making this appraisement, having a duplicate set of land and building valuation records furnished to their assessor. The reason for this was that it was considered highly desirable that the county assessor and the different city assessors should use the same valuation basis for their assessments.

This does not imply the necessity of the local city assessor using the same assessed value as the county; for each City Assessor may take any per cent of the full value he may deem necessary for his assessment. For example, it means something like this:

If a piece of land was appraised at \$1,000, and the county desired to make a 50 per cent assessment, the county assessed value would be \$500. If a city found it necessary, in order to raise sufficient revenues, to have a larger assessment, they could take, say 60 or 75 per cent and their assessed value on this piece of land would be \$600 or \$750.

Each of the above assessments, however, would be on exactly the same basis, and the equalization of land and building values would be the same for both county and city.

TO USE UNIT METHOD OF VALUATION.

In this work, the unit method of realty valuation now in use in a number of large eastern cities will be used, by

which system the following results will be obtained:

A basis for obtaining common judgment of land values;

A uniform method of applying that judgment;

A basis of comparing the value of one lot with another, one block with another, and one district with another;

Complete analysis of the factors which enter into realty values;

Means of properly classifying buildings;

Uniform inventory of building construction;

Uniform methods of ascertaining reproductive cost;

Uniform methods of depreciating buildings according to age, condition and usefulness.

It is the policy of this bureau in making appraisals to consult the best opinion of the community at large. Relative values of the various blocks in each district in the city will be carefully analyzed and decided by committees of representative citizens; consequently, when the values are established the appraisal is uniform, equalized, and based on the best opinion and judgment of the property owners of the city and county, which, of course, eliminates all opportunity for favoritism.

IMPARTIAL COMPUTATION FOR LOTS.

After basic street or frontage values are placed on the block frontages, it becomes a matter of computation to obtain the value of the individual holding, according to the size, shape and location of such holding. This is done through the application of inflexible mathematical rules and tables, which removes all chance of either under or over valuation.

Equally uniform methods of building valuations will be used to arrive at the true present value of all structures and

improvements inside the boundaries of Los Angeles County. This work will be in charge of expert building men who are thoroughly conversant with the cost of construction and the factors of depreciation for age and condition, and for lack of utility, obsolescence, mechanical deterioration, etc.

EXPERT JUDGE BUILDING VALUES.

Every building in the county will be measured and accurately described on forms prepared for the purpose. Each will then be inspected by experts who will judge of their classification and the rate of depreciation to be applied against each one after the new reproduction cost has been obtained. In this way every building in the county will be treated by the application of the same uniform method of obtaining its value.

All cases where unusual conditions are met with, will be referred to the heads of the department. The data gathered will then be computed and the result recorded in proper form.

This work will be completed by March 1, 1916, and will result in an equalization of all land and building values as between all the cities and towns of the county, and as between individual property owners in each community.

CONCLUSIONS.

It would seem that by the creation of a valuation bureau, made up by the county assessor acting in harmony with city assessors, with a staff of expert appraisers, might result in a wonderful improvement of our tax system. What we need to do in the first instance is to ascertain the actual value of the property, which is not so very difficult to do in the case of land, which is the principal item of value. When this is done then the land might just as well be listed at the actual value as at fifty per cent thereof. The result

would be lower tax rates and, what is more important, it would shift the attention of the taxpayer from the tax rate to the assessment rate, which is the main thing.

Moreover, the effect of placing a lower value on improvements, might prove highly beneficial.

The report of Mr. Moody of San Diego shows that improvements are assessed only at fifteen per cent of actual value. Quite naturally this might stimulate the making of more improvements and would materially improve industrial conditions. It would also have the effect of placing more of the tax burden on vacant lots and unimproved property. It is in line with the modern tendency to get more revenue from the unearned increment.

It is to be noted in this connection that a number of assessors stated that the matter of assessing personal property was a farce; that such property could not be properly valued and hence resulted in placing inequitable tax burdens upon the people and that the assessment of such property should not be attempted.

MUNICIPAL LIGHTING RATES ESTABLISHED BY RAILROAD COMMISSION.

The decision of the Railroad Commission in the case of the City of San Jose vs. Pacific Gas and Electric Co. was rendered November 30, 1915, but was not published until a few weeks ago. The decision applies to the territory known as the San Jose district and embraces all of the county of Santa Clara and all of the municipalities therein excepting Palo Alto and Mayfield.

It is interesting as affording an index to what should be proper charges for street lighting and the schedule of rates for this class of service in the San Jose

district can be readily compared with the charges made for identical service in other districts of the State.

There is no reason why there should be any wide variance in the rates in Santa Clara county and in other counties served by the same company.

All municipalities should, therefore, make a comparison of the rates which they are now paying with those here given, and in case discrepancies are found to call the attention of the Railroad Commission thereto.

If it is desired, the Secretary of the League will act for any municipality wishing to have its rates investigated and adjusted.

The following is the lighting schedule adopted in the decision above noted:

SCHEDULE A.

RESIDENCE AND COMMERCIAL LIGHTING SERVICE.

Character of Service.

This schedule applies to general residence and commercial lighting, and also to energy consumed by electric irons, toasters, sewing machine motors, or any of the various lamp socket appliances.

RATE.

Based on monthly consumption per meter.

7 cents per kilowatt hour for the first 20 kilowatt hours.

4 cents per kilowatt hour for the next 330 kilowatt hours.

3 cents per kilowatt hour for all over 350 kilowatt hours.

Minimum monthly charge, \$1.00 per meter.

SAN JOSE DISTRICT—SCHEDULE B. MUNICIPAL STREET LIGHTING SERVICE.

Character of Service.

This schedule of rates applies to all street, highway, and other public outdoor lighting coming under the following classes of service and includes installation and all maintenance and operation

and lamp renewals necessary for such service.

Unless otherwise agreed to between the company and consumers, the following shall apply:

Moonlight schedule—2,240 hours burning.

All night schedule—4,000 hours burning.

Midnight schedule—2,000 hours burning.

I.

FOUR AMPERE D. C. LUMINOUS SERIES
ARCS.

Moonlight and All Night Schedules.

RATE.

\$33.00 per lamp per year plus 45 cents per 100 lamp hours of burning under schedule. Payable monthly.

II.

SIX AND SIX-TENTHS AMPERE INCLOSED
CARBON ARCS.

Moonlight and All Night Schedules.

RATE.

\$31.80 per lamp per year plus 45 cents per 100 lamp hours of burning under schedule. Payable monthly.

III.

ELECTROLIERS 200-300 WATT TUNGSTENS.
All Schedules.

RATE.

\$18.00 per electrolier per year plus 1.5 cents per 1,000 watt hours based on rated capacity of lamps. Payable monthly.

IV.

SERIES OR MULTIPLE 100 WATT TUNGSTEN
INCANDESCENT LAMPS.

All Night Schedules.

RATE.

\$16.20 per lamp per year plus 15 cents per 100 lamp hours burning under schedule. Payable monthly.

V.

MULTIPLE 60 WATT CARBON INCANDESCENT LAMPS.

All Night Schedules—4,000 hours per year.

RATE.

\$10.80 per lamp per year. Payable monthly.

TRADE NOTES.

The National Tank & Pipe Company is the name of the new corporation heretofore known as the Pacific Tank & Pipe Company of Portland, Oregon. The company manufactures water, oil, mining and cyanide tanks, cross-arms and silos. Their new office is 275 Oak Street, Portland, Oregon.

The Pacific States Electric Company report the installation of some steel and electric light standards in Culver City just outside of Los Angeles in substitute for ninety-six concrete standards that had previously been installed.

The concrete standards had been installed by the owner of the tract. The residents formed a lighting district and had the concrete posts removed and the steel posts installed in place. The concrete posts were exceptionally rough and of various colors and it is claimed that they were easily chipped and marked and had become very unsightly.

The Warren Brothers Company of Boston, Mass., have issued a beautifully illustrated catalogue of their portable asphalt plant. It is claimed that this plant is not only simple in its construction and easy to operate, but that the material costs less per ton to mix than any other portable plant for both fuel and labor; furthermore, it is the only plant that can re-work old asphalt pavement for use in making repairs.

The Parsons Company of Newton, Iowa, are advertising their trench excavators for sewers. The machines are constructed in four models, each capable of digging a full range of sizes and instantly adjustable to any size.

Haggard & Marcusson Company of 1116 West 37th Street, Chicago, are putting out non-rustable steel tanks for jails.

REPLY TO LETTER FROM THE CAMERON SEPTIC TANK CO.

The following which is in reply to a letter from the Cameron Septic Tank Company was inadvertently omitted from the January issue of "Pacific Municipalities:"

Jan. 10, 1916.

Cameron Septic Tank Company,
Monachnock Building,
Chicago, Ill.
(Attention Mr. H. D. Wyllie)

Gentlemen:—Your letter of Jan. 4, containing a copy of the recent decision of the United States District Court of Kentucky in the case of Cameron Septic Tank Company vs. City of Winchester, duly received. In reply thereto, will say that we will investigate the matter as soon as possible and refer the legal questions involved to some authority on patent law. In case we are satisfied that your claims are valid and likely to be upheld by the United States Supreme Court, we will place no further impediment in the way of your collecting a reasonable royalty; in fact, if such proves to be the case, we will advise our cities that a reasonable royalty should be paid.

However, there are several matters relative to your claims which have never been understood by us and upon which we must have more light. To illustrate, some of our cities and towns have made a practice of running their sewage into a large hole in the ground and permitting the overflow to seep into a nearby stream; in one case, several large natural rock depressions have been made use of for this purpose. Do you claim that such cases constitute an infringement? Also, we would like to know the position you take in situations such as the following:

1. If a city excavates a large hole in the ground and runs its sewage into such a receptacle, making no provision for outflow (in other words, constructing a simple cesspool on a large scale) do you claim this to be an infringement?

2. If a city uses the tank feature only and makes no provision for contact beds or filter beds, does this constitute an infringement?

3. If a city excavates a large hole in the ground from which the effluent may flow on a natural gravel or sand bed, does this constitute an infringement?

There are a number of such questions to which we would like answers so that we may submit them to our attorneys for their opinion.

Yours very truly,
LEAGUE OF CALIFORNIA MUNICIPALITIES,
Per Wm. J. Locke,
Executive Secretary.

Letter to the City Attorney of Winchester, Kentucky:

Jan. 10, 1916.

Mr. F. H. Haggard,
City Attorney,
Winchester, Ky.

Dear Sir:—The Cameron Septic Tank Company has recently written to us under date of Jan. 4, calling our attention to the decision recently rendered against your city, and making a demand for royalties for numerous alleged infringements by the various cities and towns of California. We have a number of cities here that are using the tank feature only, running the effluent therefrom directly into a stream; others are using the tank feature and filter beds. Some of these tanks consist of a mere hole in the ground without any provision made for the outflow; in fact, in many cases the ground is sufficiently absorbent not to cause the tank to overflow, and as a matter of fact such tanks are purely cesspools on an enlarged scale.

We would appreciate it very much if you would kindly drop us a line and inform us of the status of the litigation and if you intend to carry the case up to the United States Supreme Court or if you consider this decision final.

Thanking you in advance for the information, we remain

Yours very truly,
LEAGUE OF CALIFORNIA MUNICIPALITIES.
Per Wm. J. Locke,
Executive Secretary.

BURLINGAME'S 1916 STREET JOBS.

The City of Burlingame, California, commenced proceedings on the 17th day of January, 1916, for the improvement of all the streets within the district known as Easton, which district comprises Easton Additions No. 1, No. 2, No. 3 and No. 4 and Burlingame Grove, all within the boundaries of Burlingame City.

The work consists of the paving of all streets within the district, not already paved, which latter are but three in number, viz.: Broadway (1,400 feet in length), Easton Drive (1,700 feet in length), El Camino Real (4,200 feet in length). The pavement to be laid will consist of a four (4) inch hydraulic concrete base and a one and one-half ($1\frac{1}{2}$) inch asphaltic wearing surface of "Topeka." The total length of streets to be paved is ten and three-quarter ($10\frac{3}{4}$) miles and the total amount of pavement is 1,625,051 square feet. Burlingame has again specified "Topeka" wearing surface, which is but following out the policy adopted four years ago. The main highway, otherwise known as the El Camino Real, the only continuous north and south road through the city, and which connects San Francisco with San Mateo, Santa Clara and further south counties, was the first "Topeka" top laid in northern California. This road receives an enormous traffic, consisting of pleasure automobiles, freight trucks, passenger busses, and horse-drawn vehicles. As many as 17,000 vehicles have passed over this highway in the City of Burlingame in one day. The road mentioned was contracted for on August 28th, 1912, and was finished by the spring of the following year. It has had no repairs except where trenches were made for the laying of pipes and the repair of the same.

The Burlingame Grove and Easton Additions are already provided with concrete sidewalks and sanitary sewers,

thus necessitating only the filling in of a few gaps in each and the laying of service laterals to the lots not provided with the same.

The improvement will further consist of the laying of 112,245 lineal feet of 14 inch concrete gutter and 55,357 lineal feet of 6 inch concrete curb.

The principal engineering problem to be considered in this work was the making of ample provision for the drainage of the storm water crossing the district.

The district of Easton is located on the lower eastern slope of a range of hills running approximately north and south. These hills rise to a height of 600 feet at the average rate of 55 feet per 1,000 feet. The drainage is easterly to San Francisco Bay. The area draining through Easton, including Easton itself, is approximately 2,580 acres. The rainfall during the winter months is heavy, the highest record for a number of years being on January 2nd, 1916, when 4.08 inches fell in 12 hours. With this condition of heavy rainfall and the steep slope of the watersheds, added to which is the fact that the district on the watersheds immediately above Easton is rapidly growing and by the paving of its streets it has thrown the water on Easton much more rapidly than before; a very complete study of the conditions was necessitated before any designing of storm sewers could be undertaken.

This storm water drainage will be cared for by the construction of 4,630 lineal feet of reinforced concrete storm sewer having a cross-sectional area of 3'x7', 630 lineal feet of reinforced concrete storm sewer of a cross-sectional area of 4'x10', 921 lineal feet of concrete storm sewer having a cross-sectional area of 2'x1' and 8,418 lineal feet of vitrified clay ironstone pipe storm sewers ranging in size from 6 inch to 18 inch in diameter. Entry to these storm sewers will be made through forty-eight 18 inch by 18 inch grated inlets and

fifty-four 24 inch by 24 inch grated inlets located on the gutter lines of the streets.

When this work is completed Burlingame will have, of its total of 31.08 miles of streets, 28.95 miles or 93% paved with hydraulic concrete base and asphaltic wearing surface and said pavement will have been accepted by the City of Burlingame for a term of twenty (20) years from the time of its completion. Also Burlingame will have 57.56 miles of sidewalk, leaving 4.6 miles yet to be done; also a complete system of sanitary sewers, consisting of main sewers and laterals for each lot in the city, excepting the Terrace Addition lots. The Pacific Gas and Electric Company will have its mains on every street with necessary service pipes run to the curb lines, and the Municipal Water Works will have its mains on every street of the city, giving ample fire protection of from 90 to 100 pounds pressure, and domestic service to the curb line. Four hundred street lights, one in each block and with electroliers on the main streets, illuminating the city, service being furnished by the Pacific Gas and Electric Company.

These improvements have been under consideration for some time, and last year, as a preparation for the same, three reinforced concrete deck culverts and seven reinforced concrete girder bridges were constructed. The culverts were constructed for the full width of streets, with a span of twelve feet. The girder bridges were also constructed for the full width of the streets with sidewalk and curb in place and the roadway formed to meet crown of the finished street. The lengths are as follows:

1	bridge	40	feet	in	length.
2	"	50	"	"	"
2	"	60	"	"	"
1	"	80	"	"	"
1	"	90	"	"	"

The work was done under the "Improvement Act of 1911" and for a cost of 99 cents per square foot, including engineering, inspection, and incidentals.

As a preliminary to instituting the improvement now being advertised, the Board of Trustees sent notices to all the property owners of the district to learn their wishes in the matter and a vote showed that they were practically unanimously in favor of the improvement. The engineer was then ordered to prepare plans and specifications.

The work above described is to be done under the "Improvement Act of 1911" with the bond act provision of 1915. The Board of Trustees gave much consideration as to the advisability of using this bond act, but upon being shown that Daly City, San Mateo, Mayfield and San Bruno, all cities in this vicinity, have successfully done work under this act, and that especially the large paving job of Daly City was let at unusually low prices, the board adopted the same for this improvement.

Under the provisions of this act the bonds for unpaid assessments are not issued against the individual lots or parcels of land, but against the entire district and in such denominations as the Board of Trustees may desire. The assessments are placed on the roll of the city tax collector, partial payments and interest being collected by him and accounts turned over to the city treasurer, who pays the same to the bondholder as the interest and payments fall due on said bonds. This undoubtedly makes a more desirable bond and will find favor with bond buyers.

The above described work was designed and will be constructed under the supervision of Eric Wold, City Engineer and Superintendent of Streets of the City of Burlingame.

PUBLIC UTILITIES AND FRANCHISES.

Conclusions Reached by the Committee on Municipal Program of the Na- tional Municipal League.

The public utility and franchise policy embodied in a model city charter should be so formulated as to conserve and further the following purposes:

1. To secure to the people of the city the best public utility service that is practicable.

2. To secure and preserve to the city as a municipal corporation the fullest possible control of the streets and of their special uses.

3. To remove as far as practicable the obstacles in the way of the extension of the practice of municipal ownership and operation of public utilities, and to render practicable the success of such ownership and operation when undertaken.

4. To secure for the people of the city public utility rates as low as practicable consistent with the realization of the three purposes above set forth.

It should be no part of such policy to secure compensation for franchises or special revenues for general city purposes by an indirect tax upon the consumers of public utility services.

In formulating a policy to carry out the four purposes above stated as desirable, the following principles should be recognized:

1. Each utility serving an urban community should be treated as far as practicable as a monopoly with the obligations of a monopoly; and its operation within the city should be based as far as practicable upon a single comprehensive ordinance or franchise grant uniform in its application to all parts of the city and to all extensions of plant and service as well as to the existing plant and service.

2. Every franchise should be revocable by the city upon just compensation being paid to its owners, when the city is prepared to undertake public ownership.

3. The control of the location and character of public utility fixtures, the character and amount of service rendered and the rates charged therefor should be reserved to the city, subject to reasonable review by the courts or a state utilities commission where one exists.

4. The granting and enforcement of franchises and the regulation of utilities operating thereunder should be subject to adequate public scrutiny and discussion and should receive full consideration by an expert bureau of the city government established and maintained for that purpose, or in case the maintenance of such bureau is impracticable, by an officer or committee designated for the purpose.

5. Private investments in public utilities should be treated as investments in aid of public credit and subject to public control, and should be safeguarded in every possible way and the rate of return allowed thereon should be reduced to the minimum return necessary in the case of safe investments with a fixed and substantially assured fair earning power.

Lots of money has been wasted by property owners in the planting of shade trees. The average property-owner is very ignorant in this matter and in trying to suit himself as to the trees he plants usually makes a mistake, either by planting the wrong variety, or by planting them too closely. The planting of streets should be exclusively in the hands of the municipal authorities administered by a tree expert. Progressive cities have already done this and it is proper for other cities to follow the example.

MUNICIPAL BONDS SCARCE.

(FINANCIAL WORLD.)

Outside the bond market on the New York Stock Exchange, where activity in trading was marked, this has been a featureless week in the investment field. Dealers have large orders from large institutions which they have been unable to fill owing to the scarcity of available bonds in the market and further cablegrams sent to England making bids for American railroad bonds there have brought out few tenders.

All dealers are not of one mind on the future of the municipal bond market, some feeling that prices are too high and will not hold, but there is no division

of opinion as to the available supplies of municipals, which are scarce, and so scarce as to actually embarrass dealers in their efforts to fill orders.

The Austin Drainage Excavator Company of Railroad Exchange Building, Chicago, Ill., are advertising a trench excavator which it is claimed is well adapted for handling sticky soil owing to self-cleaning buckets.

The Keystone Driller Company of Beaver Falls, Pa., are making a traction shovel excavator and ditcher which it is claimed does the work of forty or fifty hand-shovelers.

MOUNT SHASTA

AND THE

SISKIYOU

"SHASTA ROUTE"

SOUTHERN PACIFIC

FIRST IN SAFETY

Through the most magnificent mountain scenery in America. From Siskiyou's glorious summit looking southward on California's peaks and verdant slopes, and northward on Oregon's timbered heights and orchard-checked valleys—a succession of views unequalled in their combination.

FOUR DAILY TRAINS

San Francisco (Ferry Station) to Portland, Tacoma and Seattle

"Shasta Limited," Extra Fare \$5, 11:00 A. M.

"Portland Express", 1:00 P. M.

"Oregon Express" 8:20 P. M.

"Sound Special" 11:40 P. M.

Best Dining Car in America

Oil-burning Engines—No Cinders, No Smudge, No annoying Smoke. Awarded Grand Prize for Railway Track, Equipment, Motive Power and Safety Appliances, San Francisco Exposition, 1915.

NOTES.

The Austin-Western Co. of Chicago, claim to have the largest and most complete line of rock crushing and road making machinery in the United States.

The Tiffin Wagon Company of Tiffin, Ohio, are putting out a fine line of sprinklers and flushers, both horse-drawn and motor-driven. Their two motor system allows any water pressure desired regardless of speed of the truck.

Schultz & Hodgson of 19 S. La Salle Street, Chicago, are advertising a concrete culvert which they claim is economical as well as everlasting and can be set up in a day.

The Wahlen Company of Syracuse, N. Y., are calling attention to the fact that they received the world's highest award for concrete culvert construction at the Panama-Pacific International Exposition.

The Economy Drawing Table Company of Toledo, Ohio, invites engineers to write for their new catalogue of drawing tables, sectional filing cases and drafting room fixtures.

The Northwestern Steel & Iron Works of Eu Claire, Wis., are advertising a hand mixer for \$185.00. This company makes a practice of selling on the easy payment plan.

The Ransome Concrete Machinery Company of Dunellen, N. Y., is manufacturing a fine mixer for \$275.00 known as the "Bantam" which is of one-bag capacity, and owing to its light weight makes it a model machine for bridge, curb and sidewalk work.

The Studebaker Company of South Bend, Ind., are manufacturing a school bus which contains seats for twenty-four children and can be furnished with either glass or curtain sides.

The F. B. Zieg Manufacturing Company of Fredericktown, Ohio, are getting out a combination grader and

scarifier for which they make many claims of superiority.

Jas. Boyd & Bro., Inc., have advertised the "wormdrive" and specifications for their fire apparatus.

The National Fire Extinguisher Co. of Philadelphia, are calling attention to their automatic system utilizing chemical solution to make a fire extinguish itself.

The Fabric Fire Hose Company of New York City, claim one of the superior features of their fire hose is due to the fact that each strand of thread is waxed before being weaved.

The Goodyear Tire & Rubber Company of Akron, Ohio, claim they supplied 52½ per cent of all the new motor-driven fire apparatus manufactured last year.

The Atlas Preservative Company of 95 Liberty Street, N. Y., are advertising their new weed killer. Their method is to kill the weeds with a chemical which may be sprinkled by hand or machine.

CITY MAY SELL BY-PRODUCT.

A city owning a steam electric light and power plant may sell its waste steam and may install the necessary equipment to aid in its distribution, providing the expenditure does not create an indebtedness or permanently impair the income derived from the plant. This is the conclusion of the State Supreme Court, rendered in the opinion of Chief Justice Brantly at Helena in the case of M. W. Miligan against Miles City, Montana. In fact, the court says that the city not only has the power to do so, but it is its duty to do so as a matter of common-sense business enterprise, especially as the by-product is disposed of for a profit and thus renders the plant more efficient.

∴ What Our Pacific Coast Cities Are Doing ∴

Albany, Cal., will shortly receive plans for the new school as architects are busy preparing the same. A road roller may be purchased shortly. Resolution has been passed grading, curbing and guttering portion of Brighton avenue, Marine avenue and Dartmouth.

Anaheim has started proceedings for paving Broadway for over a mile.

Antioch received bids Jan. 10 for installing a vitrified ironstone salt-glazed sewer pipe along B street.

Arcadia received bids Feb. 3 for water meters. City engineer is preparing plans and specifications for curbs, gutters and sidewalks.

Arroyo Grande is discussing the construction of a high school.

Azusa has passed resolution of intention for construction of cement sidewalks on Dalton avenue.

Baker, Ore., will receive bids Feb. 8 for \$75,000 bonds issued to extend city water line.

Bakersfield received bids Jan. 17 for construction of eight-inch vitrified salt-glazed sewer pipe; also constructing manholes, lamp holes and wyes.

Berkeley received bids Jan. 21 for two-cylinder eight-ton gasoline or distillate road roller. The mayor is advocating more street improvements. Bids were received Jan. 25 for installation of 232 electroliers.

Burlingame has passed resolution for paving, curbing and guttering several streets.

Calxico has voted \$64,000 for water extensions; \$25,000 for sewer extensions; \$6,000 for fire truck and \$5,000 for fire truck house.

Chico is contemplating an election during the fall for a new fire engine house and an addition to the high school. Bids were received Jan. 25 for an automobile pumping engine and hose wagon combined.

Chino will probably hold an election in March to vote \$55,000 for sewers and \$73,000 for roads.

Corcoran has passed resolution to build sidewalks of cement and granite curbs.

Coronado has passed resolution for grading,

paving, sidewalking and curbing of Third avenue, Pomona avenue and "A" avenue.

Fairfield is contemplating a \$48,005 bond issue in the near future for street improvements.

Fresno has passed resolution for installation of an electrolier system.

Fullerton is contemplating the construction of a new city hall.

Glendale shows great prosperity according to its last annual report submitted by City Manager T. W. Watson. The administration of the city government is divided into three departments as follows: 1. Public Welfare. 2. Public Works. 3. Public Service. An interesting feature of the report shows that the city has nearly 9,000 trees of 58 varieties growing in the city parks; the black acacia predominates, with pepper trees next and the camphor trees third. Many trees have been set out under the Tree Planting Act of 1913, at an average cost of \$1.25 per tree including one season's care.

Grass Valley will receive bids Feb. 11 for 300 feet of 4-inch cast iron standard water pipe.

Hayward Public Library will receive bids Feb. 7 for furnishing and installing library bureau steel bracket stacks. The city may purchase fire alarm boxes.

Hemet has voted \$10,000 bonds for the improvement of Florida avenue.

Hermosa Beach city engineer is working on plans for a sewer system.

Huntington Beach has voted \$20,000 bonds for a gas plant. Resolution has been passed for the construction of sewers along several streets and alleys.

Lindsay has passed resolution for the paving of Main street and Honolulu street.

Livermore has just completed extensive improvements aggregating \$150,000, including the extension of the sewer system, sidewalk and curb construction, the installation of an ornamental electrolier street lighting system on steel standards, part being five-light clusters and the balance being three-light clusters. The principal improvement, however, was the

construction of a bitulithic pavement on all the principal streets of the city.

Los Angeles Board of Freeholders has completed the draft of a new city charter to be submitted to a vote of the people this coming June. A synopsis of the charter will be published in the next issue of *Pacific Municipalities*.

Lovelock, Nev., has voted \$90,000 bonds for a water system.

Loyalton has voted \$6,000 for completion of the electric light plant.

Manhattan Beach has voted bonds for the construction of a municipal pier. Bids were received Jan. 19 for the construction of a city hall.

Madera is discussing the disposal of sewage and council is considering plan of septic tank.

Martinez is considering bond issue for sewers, and acquisition of a water system.

Mayfield will receive bids Feb. 16 for improving several streets by grading and paving.

Monrovia is contemplating campaign for swimming pool.

National City. Plans are under way for the completion of the paving of National avenue.

Needles is contemplating the construction of a bridge over the Colorado river.

Newport Beach has voted bonds for a gas plant.

Oceanside will receive bids Feb. 9 for sale of municipal improvement water bonds.

Oroville trustees are discussing city lighting. Board of Education is proceeding with plans for a new high school.

Oxnard is considering the paving of residence streets.

Pasadena's municipal light and power plant shows continued success according to extracts from the eighth annual report by Manager C. W. Koiner. The plant was started eight years ago and during all that period has been in active competition with a hydro-electric company supplying about twenty of the neighboring towns, notwithstanding which the municipal plant has gained from year to year. It stands as an example of what American cities can accomplish by municipal ownership when their utilities are operated in a business-like manner. The plant has not only been self-sustaining but has saved the citizens of

Pasadena over \$900,000 calculated on the difference in rates charged the neighboring cities since that time. These rates, by the way, are perhaps the lowest in the state, the maximum rate for light is 5 cents per kilowatt, scaling down to 3 cents for quantity consumption with a 50-cent minimum. The power rates start at 4 cents per kilowatt and scale down to 1.2 cents, while the average rate received for street lighting last year was .04279. The success of the City of Pasadena should not be considered extraordinary in the opinion of Mr. Koiner. He believes that any other city can repeat the success by conducting its plant on business principles. Bids were received Jan. 21 for a lot of cast iron water pipe. On Feb. 8 bids will be received for an induction feeder regulator.

Paso Robles will hold an election in April to purchase a fire engine.

Petaluma city council is in line for street repairs and betterments.

Pittsburg has passed sweeping order for the construction of cement sidewalks.

Porterville city council has ordered the building of more sidewalks.

Portland is negotiating for the purchase of the St. John's Water Company's plant for \$120,000. Auditorium bonds amounting to \$565,000 will be offered for sale Feb. 21.

Reedley is contemplating reconstruction and extension of present outfall sewer system at estimated cost of about \$5,000.

Riverside will probably purchase a sewer farm in the near future.

Sacramento has passed resolution for the construction of a lot of sewer work. Bids will be received Feb. 8 for constructing additions to the city water works.

San Bruno is to have a septic tank. On Jan. 26 bids were received for sewer work and a lot of concrete sidewalks.

San Rafael has installed improvement during the year 1913 aggregating \$200,000, the principal features including asphalt street pavements amounting to \$107,000, municipal baths \$50,000, electrolier lighting system \$14,000, site for an incinerator \$12,000; in addition to this there have been many extensions in cement sidewalks, curbs, and the installation of new sewers. The city has employed Mr. F. J. Boland as city manager at a salary of \$2,400.00 per year. Additional improvements to the

amount of over \$40,000 are planned for 1916, including 24 blocks of macadam pavement and also some concrete pavement.

Santa Ana will receive bids Feb. 7 for a lot of water pipe.

Santa Barbara received bids Jan. 26 for building a brick warehouse.

Santa Clara has voted \$45,000 for street paving.

Santa Maria is discussing a municipally owned water supply; an election will be held for that purpose February 24.

Santa Monica will shortly consider plans for resurfacing all the streets, except those improved with asphalt and those which have recently been improved. James street sewer will shortly be extended.

Sawtelle is discussing pavement for Santa Monica boulevard.

Seattle, Wash., will construct a bridge over Northern Pacific tracks north of Washington canal; total cost will be about \$18,000.

Snohomish, Wash., has voted \$1,800,000 for good roads.

South San Francisco wants to purchase an auto truck. Bids were received Jan. 17 for a lot of sidewalks and construction of macadam pavement.

St. Helena received bids Jan. 11 for constructing sidewalks.

Susanville will hold a bond election Feb. 8 to bond town for \$15,000 for street improvements and \$3,000 for installation of fire alarm system.

Sutter Creek will soon call for bids for the building of a bridge.

Tracy trustees are contemplating the installation of a fire alarm system.

Tropico citizens are discussing proposition of acquiring a municipal water plant.

Turlock will receive bids Feb. 10 for construction of a Carnegie library.

Ventura is discussing the acquisition of a municipal gas plant; also the laying of more cement sidewalks.

Watts is discussing the construction of a sewer system.

Whittier will hold a bond election March 14 to vote \$110,000 for a municipal water system. A swimming pool is also being planned.

Winters has built an additional steel water tank at a cost of \$5,000; also a lot of sidewalks and curbs have been constructed. Last year a high school was completed costing \$50,000.

A city hall is about to be constructed at cost of \$12,000.

Woodland will probably call an election shortly to vote bonds for a water system, sewer system and municipal ice plant.

Yreka will hold an election in April to bond the town for the purpose of building a city hall.

CALIFORNIA COUNTIES.

Alameda County will improve East Fourteenth street by paving at cost of about \$100,000.

Kern County will receive bids Feb. 11 for \$45,000 Wasco high school district bonds. On Feb. 7 bids will be received for furnishing asphaltic oil. Feb. 10 bids will be received for one 45 horse power caterpillar. Bids will be received Feb. 8 for grading and construction of culverts on Caliente-Kernville road, Bakersfield-Taft road and Bakersfield-Mojave road.

Los Angeles County will receive bids Feb. 7 for \$868,000 San Fernando valley irrigation bonds. A board of sanitary engineers has been employed to work out plans for sewerage the entire county.

Napa County has passed resolution of intention for establishing a county free library.

San Diego County will repair La Costa bridge on the Coast highway.

San Mateo County supervisors are having plans prepared for a new county jail.

Santa Barbara County will allow \$25,000 additional to build two miles of macadam road between Santa Maria and Guadalupe. Bids will be received Feb. 7 for construction of three-hinged reinforced concrete arch bridge across El Capitan creek.

Solano County will improve road near Benicia very shortly.

Stanislaus County received bids Jan. 11 for construction of reinforced concrete bridge over San Joaquin River near Kings River Irrigation Company's canal.

Tulare County supervisors have called conference Feb. 10 to launch movement for road system.

Ventura County has received plans and specifications for bridge over the Ventura. Plans call for span for a steel bridge 200 feet long; estimated cost \$9,000. Bids were received Feb. 3 for structural steel for four bridges as follows: Saticeoy bridge, Sespe bridge, Casitas bridge and La Crosse bridge.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Animals**, regulating the slaughtering of. Sacramento, 185-c, 186-d.
- Anti-toxin**, regulating the sale of. Bakersfield, 186-c.
- Billposting**, billboards, fences, signs or other structures used for advertising purposes,—regulating. San Bruno, 179-b.
- Business and occupations**,—taxing certain (Amend.). Corona, 182-c.
- Bonds**, providing for the issuance and redemption of. Loyalton, 183-b.
- Buildings or structures**, regulating the construction, alteration and repairs of. Sacramento, 183-c, 184-a; South San Francisco, 180-a.
- Business**, professions, trades, callings, and occupations,—licensing certain. Whittier, 181-a.
- Coyotes**, providing for a bounty for scalps of. Nevada Co., 172-b.
- Chimney cleaners**, licensing. Napa, 176-f.
- City planning**, establishing. Santa Monica, 177-b.
- Concealed**, deadly weapons, prohibiting and regulating the carrying of. Elsinore, 184-b.
- Dogs**, fixing the limits within which they may run at large. Sierra Co., 173-d.
- Dogs**, imposing a tax on. Lassen Co., 176-b.
- Dogs**, prohibiting owners to permit dogs to run, track or trail. Napa Co., 176-e.
- Executive officers**, relating to. (Amending). Redding, 172-a.
- Electric conductors**, providing for the placing of underground. Sacramento, 172-f.
- Electroliers**, providing for the erection and maintenance of. Sacramento, 173-a, 173-b.
- Fire limits**, establishing. South San Francisco, 180-a.
- Fireworks**, regulating the sale, possession, storage, manufacture, and firing and discharging of. Sacramento, 172-g.
- Fire escapes**, providing for on buildings. Sacramento, 174-c.
- Fire limits**, excluding certain property from. Madera, 183-c.
- Fire limits**, establishing; also designating the character of material to be used in and regulating the construction, alteration and repairs of buildings or structures within. Sacramento, 183-c, 184-a.
- Fire escapes and exits** from theatres and public halls, regulating. San Bruno, 181-c.

Gasoline, or any products of petroleum or hydro-carbon liquid, regulating the storage of. Sacramento, 173-c; Watsonville, 189-b.

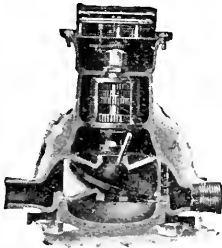
Ground squirrels, to provide for the destruction of. Kings Co., 184-d.

Garbage, rubbish and mineral wastes, defining; and providing for and regulating the keeping, collection, destruction and disposal of. Berkeley, 185-a.

Health department, creating and providing for its organization, management, and the appointment of officers and employees. Berkeley, 188-b.

Intoxicating liquors, prohibiting the sale of. (Amend.) Whittier, 185-b.

Intoxicating liquors, regulating the sale or giving away of to certain people. Whittier, 187-b.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

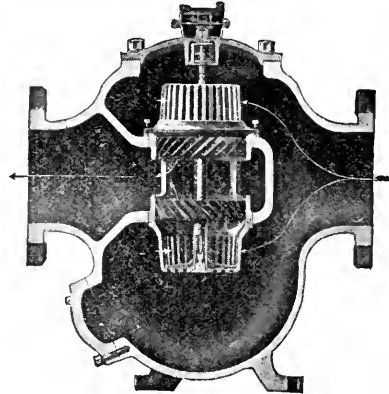
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

WATCH YOUR CITY GROW

"A CITY BEAUTIFUL"

Always Attracts, This can be Obtained by Using

"ATLAS A. WEED KILLER" Which Destroys all Existing Vegetation—Seeds and Roots.
No Danger from Grass Fires after Application.

Atlas Preservative Company of America, Inc.

RIALTO BUILDING

Write Us For Literature

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

Laundries, prescribing the kinds of buildings in which they may be located. Sacramento, 172-c.

Laundries or wash houses, regulating the establishment and operation of. Sacramento, 174-b, 174-d.

Larceny, defining. Corona, 182-d.

Loads of loose or liquid substances and heavy loads, regulating the movement and carrying of over or upon the streets. Berkeley, 180-c.

Motion pictures, posters, post cards, bill boards, pictures, public performances, all places of public amusement, and all other matters and things of a similar nature pertaining to or affecting public morals, regulating. Woodland, 172-d.

Milk, concerning the keeping, use and sale of and providing for the manner of handling and preparing the same for use. Sacramento, 180-b.

Meats and meat products, providing for the inspection of; and regulating the slaughtering of animals. Sacramento, 185-c, 186-d.

Materials and supplies, regulating the purchase, storage and issuance of. Santa Monica, 189-a.

Public morals, regulating those things which affect. Woodland, 172-d.

Planing mills, regulating. Sacramento, 172-c.

Purchase of materials and supplies by the purchasing agent, regulating. Santa Monica, 189-a.

River traffic, regulating. (Amend.) Napa, 183-a.

"Sidewalk spaces," establishing the width of, and prescribing the minimum width of cement walks. Bakersfield, 188-A.

Spur tracks and side tracks connecting warehouses, and other industries, prescribing the terms and conditions upon which may be granted revocable permission to construct and use. Sacramento, 174-a.

Structures, prohibiting the erection or maintenance of in or above the surface of the street. San Bruno, 175-a.

Sidewalks, regulating the construction of. Rio Vista, 176-d.

Second-hand goods, requiring dealers to keep a record of all purchases and sales; also regulating the manner of conducting the business. Daly City, 178-a.

Second-hand and junk dealers, regulating the business of. Corona, 182-b.

Tax, providing for the assessment, levy and collection of. Daly City, 177-a, 182-a.

Travel and traffic, regulating. Sacramento, 187-a.

Water, establishing rates, and prescribing rules and regulations governing consumers of. Whittier, 181-b.



Illumination of State Capitol, Sacramento, Cal., with Ornamental Luminous Arc Lamps.

ORNAMENTAL LUMINOUS ARC LAMPS MAKE THE "CITY BEAUTIFUL"

One of the first aids towards bettering conditions in a city and making it attractive is good light in the streets.

The Ornamental Luminous Arc Lamp does both. The brilliant, soft, white light from these lamps besides illuminating the sidewalks and streets, lights up the adjacent buildings, as shown in the above illustration, so that the architecture is brought out and locations of business offices are not wholly lost when evening falls.

Further, the appearance of the streets by day is made attractive by these handsome and attractive lighting units.

Hundreds of progressive cities have installed these Ornamental Luminous Arc Lamps which are fast becoming the accepted system of ornamental street lighting.

Get together with your board of trade and make *your* city not only attractive to the residents but also to out-of-town people.

Write our nearest office for Bulletin 4955 which describes the system in detail.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
724 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.



Mention "Pacific Municipalities" when writing for catalogs.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

Neptune Meter Co., S. F. & L. A.

National Meter Co., 681 Market St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

HAROLD S. BUTTENHEIM, Editor

M. V. FULLER, Associate Editor

The American City

published at 87 Nassau Street, New York (Chicago office, 327 South La Salle St., San Francisco office at 320 Market Street,) has just published its annual

MUNICIPAL BUYERS' GUIDE FOR 1914-1915

This guide is a book of 140 pages containing classified lists and information in regard to the products of over three hundred advertisers in THE AMERICAN CITY, representing leading manufacturers of road building and paving materials and machinery, water works supplies and equipment, street lighting, drinking fountains, trash and garbage cans, fire department apparatus and supplies, trees and shrubbery, as well as mechanical equipment for park and cemetery use, etc. Names are also included of many leading consulting engineers and landscape architects available for municipal improvement undertakings.

The price of this Buyers' Guide is 50 cents, but any official having to do with purchases of machinery or supplies may secure a copy free of charge by making request for same to our nearest office.

The American City

87 NASSAU STREET
New York City

320 MARKET STREET
San Francisco, Cal.

327 SOUTH LA SALLE ST.
Chicago, Ill.

In addition to sending the Municipal Buyers' Guide free of charge, we shall also be glad to send you a copy of THE AMERICAN CITY (in case you are not already a reader of it) together with an attractive combination subscription offer which we are making in connection with "Pacific Municipalities".

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:

Monadnock Bldg.

Northwest Office:

Northwestern Bank Bldg., Portland, Ore.

General Offices:

Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.



STRENGTH

Could you ask for more convincing proof of the ability of

"ARMCO" (American Ingot) IRON

Part Circle Corrugated Culverts

to withstand heavy external strains or unusually severe traffic conditions? The roller shown weighs fifteen tons.

Enormous strength, combined with the fact that the only material used in their manufacture is **"Armco" Iron**, guaranteed 99.84% pure, insures the user of obtaining a construction which is at all times efficient, as well as permanent and economical.

Does your City use them? If not, why not? Write us for particulars.

California Corrugated Culvert Company

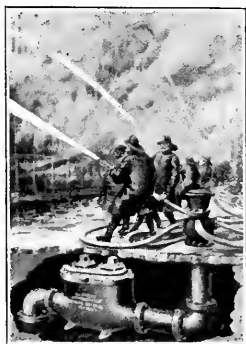
411 Leroy St.
LOS ANGELES

400 Parker St.
WEST BERKELEY

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes

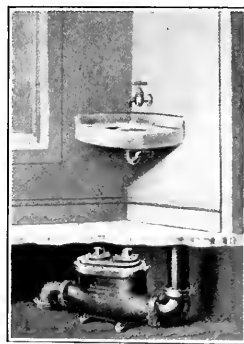


Showing the versatility of the

Empire Compound Meter

Accuracy alike on large and small streams.

Increase your revenue. Get paid for all the water.



National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA **SAN FRANCISCO**

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,
FIRE PROOFING, ROOFING TILE,
FLUE LININGS, FIRE TILE,
LAUNDRY TRAYS,
ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Street Lighting.....	Charles T. Phillips	91
History and Economics of Guaranties of Pavement on State and Municipal Highways.....	George C. Warren	97
Lighting of Business Streets.....	C. H. Tallant	106
Government Opens a Free Employment Bureau for Farmers and Others Seeking Help in San Francisco.....		109
Durable Iron.....	L. E. Kittle	110
Sensible Speed Signs		113
Editorial—		
The Last Word Regarding Municipal Elections.....		114
Advice to New Trustees.....		114
Economy in Municipal Government.....		115
Cameron Septic Tank Co. Claims.....		117
Richmond's New Milk Ordinance		120
Slanderers of the City		122
Our City Manager—Brief Statement as to What He Is Doing and Good Results of His Activities		124
What Our Pacific Coast Cities Are Doing.....		126
Titles of New Ordinances Received.....		128

ENGINEERING * BUILDING * CONTRACTING

Publication Office

Pacific Building, San Francisco, Cal.

Two Dollars a Year

Single Copy 25 Cents

NEW FORMS

To comply with 1915 Amendments to 1911 Act

An Entire Change of Forms and Records under this Act

If you are operating under the 1911 Act and Amendments, you will need the new forms as there have been many important changes.

WE CAN SUPPLY THE CORRECT BLANKS

You will need new sheets for your Street Superintendent's record, as all forms have been changed.

Our Publication the "Improvement Act of 1911" is being revised by W. J. Locke and will be ready for delivery shortly. This booklet will contain very valuable information and you will find it indispensable.

A. CARLISLE & CO.

SPECIALISTS IN MUNICIPAL SUPPLIES

251-259 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

BITULITHIC

The Pavement Which Has Proven To Be "Best By Every Test"



BOSTON, MASS.

Bitulithic Pavement. Columbia Road (at Hewins Street). Laid over old Macadam, 1915

The greatest care is used in the mixing and laying of the **BITULITHIC** pavement. It renders unflinching service.

BITULITHIC is constructed for all kinds of traffic. It is composed of varying sizes of the best stone obtainable combined with bituminous cement and laid under close laboratory supervision.

The integrity of the construction of **BITULITHIC** and the satisfaction of municipalities which have, and are still using it, far outweigh any saving in first cost.

In these days of frenzied competition in the paving field, we believe this declaration of principle is needed. And our reputation of many years' standing in the street paving industry will back it up.

BITULITHIC can be laid as satisfactorily over sound macadam foundation as over concrete foundation.

BITULITHIC is the development of many years' experience in road building. We are paving specialists and give you the benefit of our experience.

BITULITHIC PAVEMENT is the cities' best asset—as you will have a well-paved street for years to come.

No Time Like the Present to Specify **BITULITHIC** for streets to be paved this spring. The sooner you award your contract for **BITULITHIC** the earlier your streets will be ready for use.

BITULITHIC is the delight of all automobilists, abutting residents and taxpayers.

"BITULITHIC THE PAVEMENT OF QUALITY."

A postal card will bring you illustrated booklets regarding **BITULITHIC PAVEMENT**.

Why not write one today to

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
Los Angeles, Cal.
St. Louis, Mo.

Chicago, Ill.
Portland, Ore.
Richmond, Va.

Rochester, N. Y.
Phoenix, Ariz.
Nashville, Tenn.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA M U N I C I P A L I T I E S

ORGANIZED 1897

— OFFICERS —

President	- - - -	(City Clerk of San Diego)	- -	ALLEN H. WRIGHT	
First Vice-President	- -	(City Attorney of Napa)	-	WALLACE RUTHERFORD	
Second Vice-President	-	(Pres. Board of Public Works of Los Angeles)	-	LORIN A. HANDLEY	
Secretary	-	H. A. MASON	Executive Secretary	-	WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropic, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 3

EDITORS - - - H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

MARCH, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

STREET LIGHTING

By CHARLES T. PHILLIPS, Consulting Engineer, San Francisco

The use of artificial means of lighting streets dates back to 1450 B. C. when "fire-pans," "censers" and "metal braziers" were used. An attempt was made in 1417 to have the streets of London lighted by lanterns, but the plan was not a success. Paris lighted its streets with oil lanterns in 1524 and from that date until 1697 very little was attempted by other cities. In the latter year a street lighting ordinance was passed in New York City, but it was not until 1762 that oil lamps were finally installed. In the year 1806 the first gas pipes were laid and one year later Pall Mall, London, was lighted from them. Boston had gas street-lights in 1829, and in 1848 quite a number of American cities followed Boston's lead. In 1850 Chicago was lighted, and San Francisco in 1854; Los Angeles and Oakland in 1867; Seattle, 1873; Tacoma, 1885, and Spokane, in 1887.

About the year 1885 gasoline lighting,

Pintsche gas and electricity entered the field and the use of oil and illuminating gas began to decline. Electricity, a little later, took the lead and the gas advocates seemed to lose heart. At the present gas and electricity are practically the sole means of street lighting, and in the last few years the manufacturers of gas lighting apparatus have awakened to the possibilities of this means of street lighting, and have entered the field with renewed vigor.

It is the intention of this article to review what has been done in street lighting, more than to attempt to discuss the details from an engineering standpoint. It must be remembered, however, that lighting is a science and that "rule-of-thumb" methods can not be expected to give satisfactory results. It is true that installations that have been made through "judgment" are giving satisfaction as far as lighting the street is concerned, but the majority of such

installation has eventually been replaced, and when comparisons are made with properly designed systems the fallacy of trusting to "judgment" (which is only another word for guess) is easily seen.

It can be truthfully said that 90 per cent of street lighting systems, especially in the smaller towns, are selected because some other locality has a similar system. An analysis of local conditions, or of other systems does not enter into the selection. The best salesman makes the sale, and, as long as the lamps give light, the matter of efficiency, low first cost, maintenance, depreciation, obsolescence, future extensions and flexibility receive no consideration.

The fundamental requirements of street lighting are many, but the following requirements must be met by every installation: the lighting of large objects in the streets and on the sidewalks; discernment of surface irregularities; good general appearance of the lighted street.

The lighting system should be classified under four headings: Business streets; residence streets; parks and boulevards, and thinly settled streets (where present requirements are not great; but provisions should be made for future growth.)

The intensity of illumination need not be high, provided it is fairly uniform. Sufficient light should be provided upon the roadway and sidewalks to enable objects to be seen clearly. Glare should be avoided. An unprotected light-source of high intensity, if placed directly in the line of vision, produces a blinding effect which materially reduces the effectiveness of the lighting. Dense shadows should be avoided as far as practicable. The light should be steady.

It is a fallacy to imagine that any one lighting unit is suited to all conditions. Each has its own particular sphere, and, usually, it required a combination of several to get the best results.

European cities have always considered the artistic features of any structure erected on public property, while in this country it is possible to obtain a permit to install practically anything on our streets regardless of how inartistic it may be. However, in our larger cities,

the illuminating engineer works in conjunction with an art commission or a similar body, and the result is satisfactory from an engineering as well as an artistic standpoint.

In addition to the engineering and artistic features, attention is now paid to that psychological phase of the matter, which determines the pleasant or unpleasant impression produced by various methods of lighting upon the man in the street.

In illuminating engineering a thorough knowledge of optics is necessary, in order that the eye may be protected, to prevent glare, and to direct the light so that the eye can readily distinguish objects. For this reason an ideal street lighting unit should not have an intrinsic brilliancy of over 0.001 candle-power per square centimeter.

Mr. C. F. Lacombe, Chief of the Department of Water Supply, Gas & Electricity, New York City, in an article on street lighting in New York City, states, "Under the engineering scheme, all new lighting is carefully worked out mathematically and geometrically, on lines of proper illumination design. * * * All suitable kinds of reflecting and diffusing devices and glassware are tried until the best result obtainable is reached. This example is then measured and plotted photometrically and checked or corrected, as the case may be. Lighting is no longer installed empirically or by guess work. The newer lamp posts used for the improved lighting are also designed with care. * * * They combine artistic effect with engineering construction. These posts are submitted to the Art Commission in every case and their criticisms embodied in the final results."

In one of the annual reports of the Department of Gas & Electricity of Chicago it states, "The function of the layout division of this bureau is to plan all engineering work connected with the installation of street lighting systems for the city. An effort has been made to treat all districts fairly and plan the lighting for the city as a whole in one comprehensive program."

Of all obstructions to the distribution of the light rays, trees on the street pre-

sent the greatest, and poles carrying light, power, trolley, telephone wires, etc., are next. Trees should have their lower branches trimmed to a height above the top of the lighting post and the number of poles should be kept to a minimum. Some cities have ordinances governing these two items, by which trees are kept trimmed and the joint use of poles by the various companies is enforced.

Several years ago the British Illuminating Engineering Society proposed a set of specifications for street lighting, based upon the minimum horizontal illumination at any point along the illuminated street. Another proposed plan was to take as a basis of the contract the candlepower along the 20-degree and 50-degree rays from the horizontal, and that the former should be 15 per cent greater than the latter. Both proposed methods, however, have been much criticized and the consensus of opinion among street lighting experts has been that the power company should be asked only to bid upon furnishing current or upon furnishing current and maintenance to a system designed by the city's engineering department. This is, of course, where the city does not own its own lighting plant.

The practice of allowing the power company to install a system of street lighting and to furnish current and maintenance is not good practice. It eliminates competition in case a competing company should enter the field, and changes to meet more modern ideas are not so easily obtainable.

The City of Philadelphia, several years ago, was implicated in a lawsuit involving the candle-power of gasoline mantle street lamps and the accuracy of photometric measurements. The contract specifications required that the lamps were to be tested photometrically and that a deduction should be made if it were found that the lamps were below the standard set. Although it was proved that the lamps were below the standard and did not conform to the specifications, through one of those miscarriages of justice for which our courts are noted, the decision was rendered against the city.

Municipal governments, in many cases, are not as efficient as they should be. Technical matters are frequently handled by men who have had no training in that work, and, when the selection of a system of street lighting is made, it is usually based on the claims made by manufacturers of street lighting apparatus.

Where the system of lighting is owned by private corporations, owing to the investment in lamps and other apparatus, these corporations are loath to make improvements as long as the people are satisfied. Today there are numerous lighting installations in which are lamps and other equipment are used that have been obsolete for years.

When preparing plans and specifications for an installation of street lights, it should involve not only satisfactory lighting but numerous other items such as maintenance, future growth, obsolescence, etc. Only apparatus which can be furnished by two or more manufacturers should be specified, thus obtaining the benefit of close competition and reducing the liability of high maintenance. The specification should be clear and to the point, hazy clauses that confuse the bidders should be eliminated, all details should be specified and no items should be left for settlement after the contract has been awarded. Drawings should show in large scale all details; maps should be furnished showing the location of all lighting posts and obstructions; the location of water, gas and sewer conduits should be shown and every item noted in a clear manner. Plans and specifications prepared in this manner will insure low bids from responsible contractors and will reduce the possibility of controversy over misunderstanding and extra costs.

The difficulty of obtaining information of what is really wanted when bidding on work, is one of the serious problems which confronts the contractor, for it is the detail which determines what work is really worth, and low bids and good results can not be obtained with indefinite plans and specifications.

It must also be remembered that the planning of a system of street lighting, like the drawing of plans for a building,

may be done anywhere, but the supervision, of course, must be done at the point where the work is.

Our present methods of obtaining artificial light are surprisingly crude, when it is considered that for the proportionate light-giving value obtained per unit, the efficiency is only about 6 per cent. The list is headed by the flame arc lamp, the quartz tube being a close second. The enclosed carbon arc lamp falls below 1 per cent and the best nitrogen-filled incandescent lamp is slightly over 3 per cent. The best high pressure incandescent gas burner has a net efficiency of only 3 per cent; the open-flame gas burner and the kerosene lamp have less than a twentieth of 1 per cent. The rest of the energy goes off in radiation, which is either totally invisible or of comparatively slight luminous value. The majority of the luminous sources lose heavily from heat carried off by convection and conduction. No method has as yet been devised of so utilizing energy as to transform it entirely into light giving radiation. Hot gases, giving selective radiation, seem to be a field for higher efficiencies, but even here there are limitations.

The light from the firefly is light without heat and is a form of chemical light which may lead to research for a form of chemical light in which all of the radiation is in the visible spectrum.

The present method of rating lighting units is very misleading. The manufacturers usually give a rating in watts and candle-power for electric lamps, and in gas consumption and candle-power for gas lamps. In both instances the candle-power is taken at the point of maximum light and, in making a comparison between different types of lamps, this method of rating does not give a fair comparison. A rating in mean spherical candle-power, or the lumens per watt, would give a more accurate idea of the efficiency of the lamp. The useful candle-power or, as it is commonly termed, the effective lumens, will depend upon the design of the installation, the type of reflector or refractor and the spacing and mounting of the lamp.

Since the early development of the arc

lamp and the incandescent lamp, it has been a struggle for supremacy between the two. The gain in efficiency in one is usually met with marked improvements in the other. Each has its points of superiority, but it can not be said of either that it will meet all conditions. The vapor lamp has not been a very serious competitor, but at present it is steadily gaining in favor, particularly in Europe.

The arc and mercury vapor lamps have higher efficiencies in watts consumed per candle than even the best gas-filled incandescent lamp, but the latter has an advantage over the arc lamp, due to the absence of trimming and cleaning, and to the fact that it is less liable to trouble from outages and irregular performance.

The proper type of lamp to use will depend upon a large number of items. There are numerous types and makes of good lamps, and one, or perhaps several may be required to give the best results.

While there are numerous lighting units from which to select, there are but three typical forms of electrical illuminants, each, however, with several variations: the arc, the luminescent and the incandescent. The ultimate unit selected should meet the local conditions in such a way as to assist in giving the system as a whole a high over-all efficiency.

The best known electric lamps are the arc and the incandescent, and although the general principle of these two lamps has remained the same, there have been numerous improvements in both, and the efficiency and reliability have risen to a surprising degree.

The principal improvement in the incandescent has been in the filament; for its ability to stand high temperatures has increased the efficiency. The temperature at which the carbon filament operates is 1900°C , while the late type of gas-filled nitrogen lamps (the filament of which is of tungsten) operates at a temperature of 2355°C .

Numerous developments have been made in the arc lamp during recent years, the magnetite and the flaming arc being perhaps the most noteworthy. The magnetite arc lamp, also called the luminous arc, gives a distribution and

quality of light very superior to that of the early types. The electrodes used in this lamp are different from those in other forms of arc lamps heretofore used. The upper electrode is composed of a solid copper rod sheathed by a thin iron tube. The lower electrode is of magnetite, from which material the lamp derives its name. This lamp is made for both multiple and series circuits, but, as in the case with all arc lamps, the series type is the most efficient. The objection to this lamp is that it is intended for direct current only; for street lighting purpose special apparatus is necessary.

As mentioned before, the most efficient lamp on the market today, in current consumption per candle-power, is the flame arc lamp. The characteristics of this lamp are high efficiency, maximum light in the lower hemisphere, warm and pleasing quality of the light of a brilliant golden yellow, and the fact that the color of the light can be changed by impregnating the carbon electrodes with chemicals. These lamps are made to operate on both direct and alternating currents and on series and multiple circuits. The principal objection to the flame arc lamp has been the mechanism and the high cost of trimming.

While there is quite a field for the use of the different forms of arc lamps, it would be well to weigh the conditions carefully before making a selection. It has not been considered good practice, as a rule, to make an installation of less than several hundred arc lamps, as expert service is usually required in connection with same.

With the exception of kerosene oil, the earliest attempts to light streets artificially and systematically were with illuminating gas. The first gas burner was crude and inefficient, the familiar fish-tail flame from a lava tip being the most common. The invention of the gas mantle revolutionized gas lighting, and, with the advent of high pressure gas, it has become a strong competitor of the electric lamp. While high pressure gas lamps have not been used in this country to any great extent, their use in Europe is almost universal. The difference in the

quality of the gas and the difference in maintenance cost have been responsible for the adoption of the high pressure gas abroad as a standard, and of the low pressure gas in this country.

The design of the lamp casing and the standards for gas lighting have kept pace with other developments, and the inartistic gas posts of a few years ago are giving way to the more pleasing designs now used.

The objectionable features of gas street lighting have been the loss of candle-power with service, the inability to control the lighting from a central point and the damage to mantles from hand lighting. At present, however, there are several means of distant control by electrically operated valves and by what is known as the mercury valve. These devices have not been given a thorough trial as yet but the results promise to be good.

There is almost the same ability to reflect and refract the light flux from the gas mantles as there is in the incandescent electric lamps, thus securing the same efficiency in distributing the light, but the manufacturers of gas street lighting devices have been slow in taking advantage of these possibilities.

If there is close competition between electricity and gas for street lighting, both should be thoroughly investigated in an unbiased manner.

The rays of the various types of arc lamps, and the new forms of incandescent electric and gas lamps, are too glaring for satisfactory use where the lamp mounting is low, unless some form of diffuser is used. For this purpose various forms of globes and shades are used. In addition to diffusing glassware there are numerous types of reflectors and refractors which may be used in conjunction with the diffusing glass. Glass is made in four typical forms: clear, frosted, opal or milk and prismatic. Clear glass does no more than to protect the illuminant; frosted glass diffuses, but is not satisfactory, due to the large amount of light absorbed and to the fact that the rough surface accumulates dust and dirt. Opal or opales-

cent glass, while it has a high degree of diffusion and reflection, has, at the same time, a large absorption factor.

Prismatic glass, when new, is the best reflector known, coming next to the silvered mirror reflector, but, owing to its construction, a frequent cleaning is necessary.

A great many people are under the impression that clear glass offers no resistance to the passage of light rays, but from actual test it has been found that the average clear glass will absorb approximately 10 per cent of the light. Other forms of glassware absorb from 10 to 80 per cent. From these figures, which are the results of actual tests, the importance of considering the kind of glass ware to be used, becomes obvious.

To the layman there is no apparent difference in the efficiency of the many types of electroliers that are used, but from photometric tests made of a number of different types, each equipped with the same glassware and candle-power, it was found that there was considerable variation. The five-light type was perhaps the least efficient; this is the type with four globes in the form of a cross in a horizontal plane and one globe mounted above. The Seattle type, where the five globes are all in a vertical plane, has a very much higher efficiency; it is even better than the single globe type. There are objections to the single type electrolier; but by proper engineering design these objections can be overcome to a great extent.

In the designing of the street lighting electrolier or bracket, four points should be given consideration; effectiveness from an engineering standpoint, artistic design, protection from damage and weather, and provision for using either gas or electricity.

First cost is usually considered in only one way: Is the amount of money obtainable or not? Under certain conditions, low first cost may obtain an extremely satisfactory installation, while under other conditions, a low priced installation may prove the most expensive.

The distributing system of wiring or

of gas mains should be composed, if possible, of standard materials of the greatest durability and dependability. There is no reason why novelty in the scheme of arranging the apparatus should not be used, as each installation will usually warrant something out of the ordinary in the design. Seattle, Toronto, Chicago, Alameda and the proposed system for Milwaukee have all different details embodied in their designs, yet each case represents good engineering practice.

It is not always possible to know in advance what allowance to make for future growth, as conditions may arise which are impossible to foresee. Sufficient allowance must be made, however, for future extensions and additional load, but the installation should not be burdened with a large idle investment.

The use of statistics as a means of giving the buyer information about street lighting apparatus is very misleading. If they can be used truthfully and so intelligently as to be understood easily, and if the weak as well as the strong points are given equal consideration, then statistics have an important place. When two parties cite, for instance, the experience of the same municipally-owned and operated plant, one as an argument in favor of and the other as an argument against public ownership, it is perfectly clear to the listening public that one or the other is either innocently or willfully misrepresenting the real situation. Time and time again the three-cent electric railway fare prevailing in Cleveland has been referred to, without explaining that one cent is charged for a transfer, and that, to produce this fare, the city forced a valuation under which stockholders lost 45 per cent of their stock.

The municipally-owned electric plant in Seattle has been attacked at frequent intervals by newspapers and individuals who are opposed to municipal ownership, yet, if the statistics of this plant are considered in an unbiased manner, it will be found that not only have rates been reduced but that the plant is on a firm financial basis.

The History and Economics of Guaranties of Pavement on State and Municipal Highways

By GEORGE C. WARREN

(CONCLUDED FROM FEBRUARY ISSUE)

PRACTICAL.

Under this head, rather than state his own views, which might be warped by his interest as a producer of and contractor for street pavements and country roads, the writer will collate extracts from matter written by engineers and others interested in the matter from the points of view of Municipalities.

Considering the troubles growing out of the historical and legal experience outlined above, it is natural that the subject should have become an important topic of discussion at Convention of Engineering Societies. As early as 1902 the American Society of Municipal Improvements, the active membership of which is composed of over 275 municipal officials of the United States and Canada, had this matter under discussion, in the course of which Nelson P. Lewis, Chief Engineer of the Board of Estimate and Apportionment of the City of New York, made the following remarks:

"In my judgment there has been a good deal of false reasoning about the proper and best length for guaranty for pavements, especially at the present time. Formerly New York required a fifteen-year guaranty. Brooklyn required a five-year guaranty. After consultation a compromise of ten years was agreed upon as the guaranty period. Personally I advocated the reduction to five years, and my reason for it (and I think most of you will agree with me) was this: As the area of asphalt pavements is extended the traffic

becomes less concentrated, more uniformly diffused. When asphalt pavements are first laid in a city, or where other routes are established, an abnormal amount of traffic is brought to them. Besides that, there is at the present time a marvelous change going on in the character of street traffic. Rubber tires are on many of our vehicles, rubber pads are used on horses' shoes, and it would be a rash man who would predict what percentage of vehicles will be propelled without horses in another ten years. The bidder for that pavement is obliged to make his estimate, or make his bid, upon his experience with pavements five or ten years old. In other words, his guess or his estimate will be based upon a more concentrated traffic and upon more severe treatment. He will not discount the future very much. I cannot but believe that ten years from now there will be still more radical change in the vehicular traffic on our streets. This change is all in favor of the pavement, and I believe that it would be wiser for the city to take advantage of the improved conditions than to allow the contractor to have all of that advantage, and it seems to me that is sufficient reason to advocate a guaranty for five years, at the end of which time, I think, the problem will be a good deal simplified."

Col. J. W. Howard, Consulting Engineer of Roads, Streets and Pavements, in a pamphlet issued in June, 1911, entitled, "Good Pavements on Streets—Not Guaranties on Paper," said:

"A guaranty bond takes a pavement from the control of the engineering department and puts it for a long period as a burden on the legal department of a city, which is an unsatisfactory, slow and uncertain way to convert a poor pavement into a good one; and it is not for the interest of cities to require guaranties beyond such a period as will bring out defects due to neglect or accident of construction and that such defects appear within one or two years. Two years are sufficient to demonstrate the quality of a pavement laid under inspection of a competent man in any city. Taxpayers wish a good pavement on a street and not a bond in a city hall."

From the Proceedings of the American Society of Municipal Improvements covering its 1906 convention, the following is quoted:

"The past tendency to depend for good pavements on bonds or guaranties is beginning to cease. The responsibility for good construction and maintenance is being gradually placed upon city engineers. Where the city depends upon a guarantee or bond, this means to transfer the responsibility from the engineer to the legal department of a city. Lawyers do not inspect a pavement and compel a contractor to keep it in good order. They wait until a pavement has become useless, as, for example, with poor brick and certain kinds of asphalt pavements injured by weather and light traffic, and then try to collect cash damages. The people would prefer to have a pavement on the street rather than a bond or cash damages. Your committee recommends that pavement guarantees be gradually abolished and that city engineers shall be made responsible to secure the best pavements of various kinds called for on different streets and roads."

At the 1907 convention of the same

society, John B. Hittell, Chief Engineer of the Department of Streets of the Board of Local Improvements of the City of Chicago, read a comprehensive paper, "Guaranty Clause in Paving Specifications—Its History in Chicago," from which the following is extracted:

"As an example of the operation, I have in mind one street which was paved in 1901. *The pavement began to disintegrate two years after construction, so that the contractor had to make repairs in 1903. In the spring of 1904, the contractor, having gone out of the paving business, the surety company made the repairs, and in the fall of the same year the street again became dilapidated, and the contractor and surety refusing to do anything further, the city was obliged to appropriate money and make the repairs. The street was again repaired in the fall of 1904 and in 1905, and in 1906 it became evident that repairing in places was of no avail, and it was then decided, after detailed notes of the street were made and photographs taken, to advertise for the entire resurfacing of the part of the street which had always been the worst, and to repair the remaining part and take a guaranty for this work to extend to the date of the expiration of the original ten year guaranty, viz., 1911. When the surety company was called in it stated, in substance, that it could do nothing until the city had secured a judgment against it and its principal, because the principal had warned it to pay only at its peril, stating that he did the work under city ordinance and specifications, complying in all cases with the instructions of the inspectors and engineers, and that the city accepted the work and thereby relieved him from further obligation.*"

Samuel Whinery, C. E., author of "Municipal Public Works," published by McMillan & Co., New York, in the year 1903, in chapter on the subject

of Pavement Guaranties makes the following statement:

"There is another feature of guaranties that must be considered. If a contractor is required to maintain a pavement for a period of years, *care must be taken by the municipality to do nothing itself and to prevent others from doing anything that will relieve the contractor from his obligation.* For instance, the municipality may not itself, nor may it permit others, to remove and then repair parts of a guaranteed pavement for the purpose of constructing railroads, sewers, or other underground structures, since not only may the contractor assert, and often truly, that the adjoining pavement was injured in the operation, but he may claim that defects appearing in the future may be within the part of the street disturbed and repaired by parties other than himself, and for which, therefore, he cannot be held responsible; and it is generally difficult, if not impossible, to locate accurately, after the lapse of a year or two, the repairs made by those other parties. * * *

"In view of all the facts it may therefore well be questioned whether, in the end, the municipality is not the loser rather than the gainer through the operation of guaranties on public work. * * *

"Assuming that the work contemplated is of an ordinary and well-known kind, or in other words, that it is not of an experimental character; that the quality of the materials used can be readily determined; and that the degree of skill and the character of workmanship necessary to do the work properly are understood by the city's agent; and assuming further that the work will be awarded to a contractor of known character and responsibility and that during its progress it will be properly supervised and inspected by the agents of the municipalities, there should be no difficulty in securing its performance, so far as

materials and workmanship are concerned, in a satisfactory manner. *Especially may this result be expected when it is remembered that work done under a guaranty is not so likely to be carefully inspected, because the contractor, in that case, is supposed to assume the greater responsibility for the quality of the work.*

"In this connection it must be remembered that there must always be a question as to how far a municipality may dictate to a contractor who is required to guarantee his work. The contractor may claim that if he is to be held responsible for results, he must be free to exercise his judgment as to the best means of securing those results, and that if the municipality assumes to dictate methods he, the contractor, cannot be justly responsible for results.

"The question of the legality of long-time guaranties has often been raised and deserves careful consideration. Where public work, and particularly street paving, is paid for partly or wholly by special assessments, the laws almost invariably provide that *the cost of construction alone may be assessed upon the property owners benefited*, and it is either expressly or by implication provided that *the cost of maintaining the work, after it is constructed, shall be met from the general fund.* It is therefore necessary to distinguish between repairs that may become necessary because of faulty materials or workmanship, and those which will inevitably become necessary because of the wear and tear of use, however well the work of construction may have been done. This latter class of repairs may properly be called maintenance, but the guaranty clauses in use in most cities are so drawn as to compel the guarantor to maintain the work in good condition during the period of guaranty, regardless of whether it was properly constructed or not, *and it cannot be doubted that the contractor*

in framing his bid for the work adds to the price of construction a certain sum to cover the cost of maintenance."

H. L. Collier, Commissioner of Public Works of Atlanta, Ga., in the year 1907, made the following statement:

"We have to maintain all classes of our pavement, notwithstanding we have paid in advance to have them maintained. As evidence that we have paid we have guarantee bonds—but what do they amount to, pray? Absolutely nothing. And having to maintain, why not prepare for original construction?"

"The pavement within a year begins to unravel; we notify the contractor, he is as dumb as an oyster; and to avoid damage suits we make repairs, present our bills for payment, and again the contractors and the bond company are as dumb as two oysters. We sue—they smile. At the trial, some years after, they set up the plea that the failure of their pavement was due to the wiggling of the street car tracks. If that doesn't stagger the judge, they declare they carried out the city engineer's specifications to the letter and the fault was his. If the judge still shows signs of vitality, they declare the city gave a utility company, or a plumber, a permit to cut a hole in the pavement and water got under the pavement at this cut and disintegrated the whole pavement, above and below the cut.

"By this time the city engineer, the commissioner of public works and the city attorney have either gone to their long rest, or have in disgust retired from office—on pensions."

In a paper published in *Municipal Engineering Magazine* in September, 1911, J. C. Travilla, C. E., Street Commissioner of St. Louis, Mo., made the following statement:

"The maintenance of a bituminous pavement for a period of five years from the date of its completion usually devolves

upon the contractor. This period of time has been fixed by city officials because of their lack of knowledge of the resistance to traffic and temperature changes of bituminous materials.

"With standard specifications and laboratory facilities this guarantee will in time, be reduced to a much shorter period. The guarantee contracts are a source of trouble to the commissioner, since the contractor tends to suit his own convenience in starting repairs. Usually he is inclined to wait until some service corporation cuts are to be repaired in the vicinity of the maintenance work."

The following is quoted from an editorial in "The Contractor" of July 1, 1911:

"PAVING GUARANTEES.

"A number of commercial and civic organizations in New York City have by concerted action protested against the condition of the street paving in the Borough of Manhattan. * * *

"This protest is valuable as coming from prominent business men, inasmuch as they show a decided interest in public improvements, and they call attention to some business points in connection with street work upon which they are competent to pass. They state that poor pavements exist due to inadequate methods of maintenance, namely: the combination of contracts for maintenance during a period of years with the original construction, whereby the contractor benefits by neglecting to make repairs, the city is without adequate power to compel repairs to be made promptly and the work of repairing is carried on only sporadically and at uncertain intervals instead of systematically and continuously.

"Paving guarantees and maintenance clauses are not engineering features, but *plain common sense, and business acumen point to the fact that such things are not*

only bad for the cities but they are expensive for contractors and help to bring them into bad repute. These things have been discussed in these columns before, but it is opportune to call attention to these things once more in the hope that they can be corrected.

"However, if such features were taken out of specifications and contracts, or reduced to a reasonable term, gradually the price of new paving would be reduced and the cities would save the taxpayers thousands of dollars.

"Then city engineers and street commissioners could devise systematic methods of maintaining and repairing street pavements and our large cities would for the first time in their history have first-class streets."

The following is extracted from address by Edwin A. Fisher, C. E., City Engineer of Rochester, N. Y., at the forty-third quarterly meeting, Williamsport Board of Trade, June 12, 1911:

"Much has been said and written upon the subject of pavement guaranties. A few years ago a long guaranty was thought to be the one thing needful in street paving. New York City laid many pavements under a fifteen-year guaranty period. Many other cities, unless prevented by charters, exacted ten years. Of late, however, a reaction has set in and many engineers and other municipal officers argue that the guaranty should be abolished entirely. I believe that some guaranty is essential, but that it should not cover an extended maintenance, but be limited generally to the material and workmanship. * * *

"We have fixed the guaranty period for standard pavements at five years, and for resurfaced streets and sidewalks at three years. I do not think a uniform length of guaranty of all kinds of pavements is right. It ought to be only long enough to detect defects of material

and construction and should vary with the different kinds of pavements, and other conditions."

The following is extracted from Municipal Engineering, February, 1913:

"PAVEMENT GUARANTEES, LOUISVILLE, KENTUCKY.

"COURT DECIDES CITY CANNOT RECEIVE
FROM CONTRACTOR UNDER GUARANTY
FOR DEFECTIVE WORK IF
DONE UNDER CITY INSPECTION.

CITY PROPOSES TO ADOPT RIGID SPECIFICATIONS AND NO GUARANTY.

"A recent court experience has led to this action as a necessary alternative to allowing the contractor to construct the street according to his method and accepting or rejecting the completed street. *It seems that a brick street was constructed under the city's inspection in which some defects developed after the street was finished and accepted.* The attempt was made to force the contractor to put the street in good condition under his guaranty. *While the contractor's claim that the fault was with the specifications and not with his workmanship was disproved by the evidence of several engineers with large experience in brick paving, the court held that the street was laid under the city's inspectors and with their approval, and, therefore, the acceptance of the street relieved the contractor of liability under his guarantee for the defects found.*

"The alternative open to the city under this decision *seems to be the construction of streets by the contractors without official action by inspectors, or the closest possible inspection under the most rigid specifications. Under the first the city may know in what ways the work is not properly done or in what ways the specifications are violated, and may even notify the*

contractor of the deficiencies, but will not relieve him of responsibility under his guarantee or from the liability of judgment against him in case suit is brought for damages on account of his violations of his contract. Under the second the city assumes all responsibility and no guarantee is necessary and it may be omitted from the specifications with a possibility that it will reduce the bids for the work.

"SHALL THE GUARANTY CLAUSE BE
OMITTED?"

"The latter course is advocated by the city's engineers and they are prepared to follow it to the letter if it is adopted by the department of public works."

TORONTO, ONTARIO, PAVEMENT
GUARANTIES.

(Official Proceedings)

GUARANTEE FOR PERMANENT PAVE-
MENTS.

The Board recommend the adoption of the appended report of the City Engineer reduction of guarantee period for permanent pavements, viz.:

CITY ENGINEER'S OFFICE,

Toronto, February 16, 1909.

Joseph Oliver, Esq., Mayor (Chairman),
and Members of Board of Control:

GENTLEMEN: All contracts for the construction of asphalt, bitulithic, granite sets, vitrified block pavements, call upon the contractor to maintain same for a period of ten years. This long term of guarantee was asked originally more especially for asphalt pavements, because very little was known about the use of this class of material.

We have now a much better knowledge of the various asphalts and nearly all city engineers have now connected with their department a chemist and a first-class laboratory, which affords every facility for making chemical tests of the various materials used in the construction of roadways. This being the

case, several cities have reduced the guarantee period from ten to five years, and in some cases to one year.

I would recommend to your Board that the guarantee on the permanent pavement mentioned above be reduced to five years

Respectfully yours,

C. H. RUST,

City Engineer.

On February 22d the recommendation of the city engineer that the guarantee on bitulithic pavements be reduced from ten to five years was adopted.

The following resolution was adopted by the Board of Contract and Supply, Rochester, N. Y., May 27, 1909:

"WHEREAS, The existing ordinance of the Common Council relative to the construction of pavements, passed June 4, 1901, requires a guaranty of the pavement for a period of ten years after the completion of the works; and

"WHEREAS, the various surety companies who have heretofore been sureties upon contractors' bonds for pavement contracts, including the ten years' guaranty of the same, have notified the city engineer that they will not execute a contract guaranteeing a pavement for a period more than five years after the final completion of the work, therefore, be it

"RESOLVED, That all guarantee bonds for the construction of pavements hereafter accepted by the authorities of the city, may limit the surety thereon to five years' guaranty of the pavement after the final completion and acceptance of the work."

The following is extracted from Minutes of City Council, Ottawa, Ontario, May 17, 1909:

"That clause 10 of Report No. 11 of the Board of Control, recommending that, in the case of all future contracts for asphalt pavements, the contractor's

guarantee be reduced from 10 to 5 years, be and is hereby approved."

PAVEMENT GUARANTEE SPECIFICATIONS.

In an effort to rigidly fix the conditions of maintenance, specifications were promulgated and adopted by a number of cities beginning about the year 1897 which, while intended to clarify the situation, in reality made matters worse by exacting conditions which were impracticable of enforcement and if enforced would be unreasonable and unfair to contractors.

Among the types of impracticable requirements of pavement guaranties the following has in the past been frequently adopted by municipalities, and, in fact, had its birth about 20 years ago in one of the engineering societies. It required:

"(A) No depressions shall be in the pavement at any time during or at the expiration of the guarantee period which are as great as $\frac{3}{8}$ of an inch in depth, as shown by a four-foot straight edge.

(B) During the guarantee period, the pavement shall not lose by compression or wear, more than one-half ($\frac{1}{2}$ ") in thickness.

(C) Not more than two cracks shall appear in a distance of fifty linear feet of street, and all cracks which show disintegration or are more than $\frac{3}{8}$ of an inch wide, shall be repaired.

(D) If fifty per cent of any section of street requires repairs, the whole section shall be removed."

I will comment on these requirements as follows:

A. Three-eighths of an inch depression as shown by a four-foot straight edge. It is fair to say that no pavement has ever maintained such a degree of excellence for five years that it would successfully stand such a test. I have

prepared and tacked on the blackboard a strip of paper four feet long, one edge of which is cut on a curve, the center of which is $\frac{3}{8}$ " below the ends. You will observe that the depression is so very slight that even the trained eye of the engineer cannot perceive its curvature. How ridiculous it is to make this a test for the surface of a pavement after several years' hard usage. If the specification provided that the pavement should have no depressions which will hold water to a depth greater than $\frac{3}{8}$ ", the requirement would have a practical basis for its existence.

B. The wear shall not be greater than one-half ($\frac{1}{2}$ ") inch in depth and this regardless of the term of guaranty or character or volume of traffic to which the pavement had been subjected and care or lack of care by the city in the matter of cleanliness, which has a great bearing on the wear of a pavement or to the general excellence of the pavement in all other respects.

C. Not more than two cracks in 50 lineal feet of street. It is well known that under some climatic and sub-soil conditions a pavement may crack to a much greater extent than this and still be an excellent pavement.

D. If 50% of any block requires repairs the entire block shall be entirely removed regardless of how perfect the balance of the block may be.

Taken together it is believed that if these tests were rigidly applied to any pavement which has been subjected to even a moderate degree of mixed vehicular traffic for five or ten years that the pavement would have to be relaid entire even though the construction were as perfect of its kind as could be produced.

On account of its impracticability this form of guaranty has generally fallen into "innocuous desuetude," but still we find the requirement in the specification of a few cities and their engineers,

while admitting the impracticability of enforcement, making the absolutely unfair argument that, it gives the city a "whip handle" over the contractor in the matter of repairs.

Guaranties as well as specifications in all other respects should not be so worded that they are impracticable of accomplishment. Otherwise the specifications not only lead to serious legal disputes but are absolutely dishonest however much the engineer may argue that he does not mean to construe them unreasonably. Even if the engineer who drafts such a specification is himself so honest that he will not take unfair advantage of such a "whip handle," his successor who applies the requirement at the expiration of a guaranty period may be less honest or more technical in his requirement of enforcement.

In very recent litigation over a paving contract one of the most prominent municipal engineers of the West, acting in the capacity of expert, in criticizing a certain extremely rigid specification, stated that it "cannot be practically complied with, and enables the engineer to heckle any contractor into bankruptcy." On cross-examination, this expert engineering witness was shown that the specification which he so severely criticized was in fact copied from a specification originally written by him in his municipal practice only two years before. When urged to explain the difference between his severe criticism of a brother engineer and his own municipal practice in the adoption of identical specifications, he replied in substance, "I knew what I was about and only intended to have a weapon in my hand which would enable me to secure proper results." Assuming that *he himself* is of such an exemplary character that he could suspend the wielding of the weapon at just the

dividing line between good construction and rank injustice to the contractor, how about his possibly less high-minded successor either in charge of construction or the carrying out of a guaranty contract, and how about the engineers of other cities who, either from the highest or lowest motives might follow the lead and reputation of this high-minded engineer but who, in application of the specification should either from technical unreasonableness or dishonesty actually "heckle the contractor into bankruptcy?" Whether in matters of construction or maintenance, one of the first requisites of a fair, honest specification is one which not only clearly expresses the intent but leaves neither the contractor nor engineer an opportunity to "wield a weapon" and force any unfair advantage over the other party. Such an official attitude as the one expressed by the expert engineer above referred to is absolutely dishonest. Nothing could do more to engender and encourage dishonesty on the part of the contractors. If dishonesty were ever justifiable then, with such a condition before him, a contractor would be justified in "skimping" his work at every turn.

In my humble judgment it is as improper and dishonest for an engineer to specify more than can be usefully, fairly or practically accomplished, as it is for a contractor to "slide in" four parts of sand to one of cement when the specifications provide for three parts of sand.

The city cannot expect, at the end of any guarantee period, to have a perfect pavement. It cannot expect that a pavement, during a guarantee period, will not wear or that the surface will not become distorted to some extent. If the surface is maintained and turned over to the city at the expiration of the guarantee "in good serviceable condi-

tion, and free from any defects that will impair its usefulness as a roadway," it seems that is all the city can reasonably expect, and all it can properly undertake to define in a guarantee.

In the year 1910 there was organized the "Association for Standardizing Paving Specifications," consisting of municipal officials, chiefly engineers, of over 100 cities of the United States and Canada. One of the matters taken up by this association was that of pavement guaranties, through a representative committee of ten city engineers, city attorneys and commissioners of public works, of the cities of New Orleans, New York, Buffalo, Kansas City, Milwaukee, Norfolk, New Haven, Chicago, Syracuse and South Omaha.

At the second Annual Convention of the Association held in New York January 10th to 14th, 1911, inclusive, the unanimous report of the committee was unanimously adopted by the association and the following extracts are quoted from its published proceedings:

"Exact a construction bond only to guarantee the faithful execution of the contract in all its details, the completion and acceptance of the work to be final as far as the contractor is concerned, and that no maintenance obligation whatsoever be imposed.

"We are constrained to make this recommendation because we believe it will ultimately result in economy to a city and its property holders who pay for a pavement. It is certain that every fixed charge that is imposed on a contractor, by reason of a bond, or retainer, or such an unknown quantity as the wear and tear of a pavement, is charged for by him in his bid, though such charge may not appear on the surface. These charges undoubtedly amount to many times more than what would be the cost of suitable supervision to insure against defective materials and work-

manship, which is all that must be guarded against if the maintenance period will be fixed for that purpose only and not to care for ordinary wear and tear."

The Committee further recommended, for any city desiring maintenance periods, that it adopt the following requirement for maintenance in paving contracts:

"Maintenance shall include and cover inherent defects in pavement, or foundation thereof, or in any other items of work embraced in the contract and shall also include such disintegration as may result from ordinary usage. Maintenance, however, shall not include general wear or any damage to the pavement, or to the foundation thereof, or to any of the other items of work embraced by the contract, which may be incurred by action of the state of.....or authorities of the city of..... in tearing up, or disturbing the same, or resulting therefrom, or by or under any grant, privilege, or permit granted to them so to do by said state or city; nor any damage which the pavement may suffer from accident to sub-surface structure."

At its Third Annual Convention held in New Orleans January 8th to 13th, 1913, inclusive, the Committee on Bonds and Guaranties made a further exhaustive report, clearly distinguishing between "Guaranty" and "Maintenance," and says:

"Many of the cities by reason of charter requirements can not legally introduce into the contract a provision which will result in the charging of any of the costs of maintenance upon the local property owner, since such cost is by law a charge on the city at large;" and provides that:

"A period of five years be exacted since it has been fairly well demonstrated that any of the pavements now in common use when properly made and laid will last that long without repairs."

The Lighting of Business Streets

By C. H. TALLANT

With the passing of the Panama-Pacific Exposition at San Francisco has come a realization, through the loss of its beautiful and distinctive illumination, of the importance of adequate outdoor lighting. One of the Exposition's greatest lessons to the public was that street lighting can be very beautiful and still utilitarian. Modern developments in the science and art of illumination have made this possible, and the Exposition marked an epoch in illumination progress as only the latest developments in illuminants were used. The immense possibilities of properly illuminated business streets were forcibly brought out as the Exposition avenues more nearly resembled the main business streets of towns and cities than any other of a community's streets.

Until W. D'A. Ryan, the illuminating engineer of the Exposition, showed us the possibilities of street, parkway and

avenue lighting, with his wonderful scheme at the Exposition, the subject of street illumination had not been given much attention by people at large or by business men on the Coast. But his masterly treatment of the Exposition lighting and his ingenious commercial application of the same system immediately afterward for San Francisco's main street, has opened the doors to street lighting supremacy in Coast cities. With a low cost of light production, possible through our natural resources, we have the ability to make the Coast cities the best lighted group in the world, and the example of the Exposition lighting has laid the foundation in the public mind for such a leadership.

The Exposition lighting showed that appropriate and adequate lighting was a tangible business asset to the Exposition management or for any business community. Crowds gather where the



Street Illumination at Baltimore, Md., by Ornamental Luminous Arc Lamps.

most pleasing light is burning. More than that, the coming of the moving picture theaters, modern stores with their well-lit show windows, and numerous automobiles has resulted in bringing more people on the streets at night and at the same time has made traffic more complicated. This in turn has created a greater need for better lighted streets, and induces greater appreciation when such light is provided. Under these changed conditions the greatest need for better lighted streets has naturally been devel-

ter light which should have been put on these streets has not been generally provided.

One other factor in business street lighting which the Exposition brought out was that of quality of light. Ryan's system was highly ornamental, as well as useful, and the quality of the light appealed to many people as its best feature. The crowds were drawn through and away from the garishly lit Zone to the beautifully illuminated main section and there they spent their evenings, held by



Night Illumination of Fifth Avenue, Pittsburgh by Form 10 6.6 Amp. Ornamental Luminous Arc Lamps Mounted on Brackets.

oped in the business sections. Competition has forced the storekeeper to require more light in displaying his goods in order to attract attention to his store and subsequently bring people there in the daytime. The numerous automobiles have made night traffic more dangerous and therefore more essential that footing for pedestrians be safer. A general improvement in business street lighting in Pacific Coast cities has not been made, however, to take care of the increased need. The relatively more light and bet-

ter many pleasing effects of the soft flood lighting on the buildings and courts. It proved its worth as a business bringing factor, as many people nightly made the trip to the Exposition to enjoy the lighting. They would wander through the courts and around the buildings, and only make their way to the still lighted Zone after the main section was dimmed at 10 o'clock.

It is stated above that Western cities in general have been slower in improving the lighting of their business and

residence streets than the Eastern cities. Principally is this so because the Eastern cities have felt the need for improvement sooner and more intensely and have answered sooner by improving their lighting systems. But the steady growth of our Western communities is making this problem more acute and one that will soon have to be met. It is an interesting fact that the luminous arc lamp which was such a success at the Exposition is the type of lamp which is in general use in the East in ornamental

a system induces in the community. Civic pride is built up and the residents have a definite topic of distinction to talk about. Business in general is improved as out-of-town residents who come into the city to see and enjoy the superior lighting unconsciously soon become customers of the stores and business houses of that city.

Co-operation and a general improvement of personal relations is brought about by an adequate ornamental business section lighting system more surely



Night View of Market Street, Lynn, Mass., Showing Ornamental Luminous Arc Lamp.

systems, because it has proved its value for such use. In it are combined all of the necessary qualities of an ornamental street lighting unit.

The benefits and results of an efficient, adequate, ornamental lighting system on business streets are many. Such a system is a definite financial asset to the business section of any community and to the whole of the community. People like to live and spend their time in a city that has adequate lighting, because of the wide-awake, live atmosphere such

than by any other civic improvement. Petty differences and frictions are forgotten in the general effort to make the most of the superior lighting system, and there is a concentrated tendency to improve all parts of the city and all conditions in it. The community awakens to its bigger possibilities. Stores are improved, streets are kept in better condition, residences are freshened up, and morals are put on a higher plane. One other very definite good result of better lighting is the reduction of crime and



Night View of Munroe Street, Lynn, Mass., Ornamental Luminous Arc Lamp.

lawlessness, as the undesirable element shuns light and goes to the darker places elsewhere to commit its crimes. Attest to this that daylight crime is comparatively infrequent.

The Pacific Coast with its characteristic progressiveness is rapidly assuming a strong commercial position in our country; the time will soon come when our street lighting will be pointed to as the standard.

Government Opens a Free Employment Bureau for Farmers and Others Seeking Help in San Francisco

The Government has opened a Free Employment Bureau and Labor Exchange in the U. S. Appraiser's Building, San Francisco, for the purpose of bringing the job and jobless together without cost to employer or workman.

Every postoffice is supplied with blank forms of application for the benefit of farmers and others who seek help, and the man who wants employment. These

blanks are transmitted through the mail to the office of the Bureau in San Francisco, without postage. This service is free to the employer and employee. Applications can be made with the blank forms, by telephone, Sutter 6108, letter or personal call.

Furthermore, it is the object of the Bureau to promote a beneficial distribution of the unemployed in the congested communities throughout the country and bring the landless man to the manless land. It is also a division of information for the benefit of the prospective settler, the farmer in need of help, and the person seeking work.

All applications are honored by registration, and an effort made to supply the demand.

A corps of efficient officers have been detailed by the Commissioner of Immigration at this port, to attend to this work exclusively.

The Division is a branch of the Bureau of Immigration, under the supervision of the U. S. Department of Labor, Washington, D. C.

DURABLE IRON

By L. E. KITTLE

One of the greatest economic problems of the modern world is that presented by the rapid deterioration of most iron and steel when exposed to the weather or placed in the ground. Wealth to the amount of millions of dollars is sacrificed in this way every year, and vast as are the natural store-houses of iron ore, it is doubtful whether a civilization, resting as does ours upon coal and iron, can endure for many centuries at the present rate of consumption.

Nearly all of the metals are subject to oxidation or rust. In the case of gold and silver, copper and lead, however, there is a happy provision of nature in the manner of their rusting which tends to retard and finally to stop the process of corrosion unless much more actively corrosive agents than air and water are present. This protective influence consists in the character of the rust or oxide. Upon all of these metals the oxidized surface formed under ordinary conditions of exposure is very closely adherent and of such fine grain that air and moisture are soon prevented from penetrating to the metal beneath, the oxides themselves thus constituting protective coatings.

Iron, the most useful of all the metals, is unfortunately to a greater or less extent an exception to this method of self-protection. The rust upon iron and still more upon those alloys of iron with carbon, manganese, etc., which are properly classed as steel, tends to be coarse and loosely adherent. It is usually very far from constituting a water-tight covering and indeed often serves to retain the air and moisture in close contact with the base metal and thus itself to accelerate rusting much in the same way as the bark on a dead tree retains and fosters the agents of decay.

Various types of iron and steel differ very widely in respect to the character of the rust developed under exposure. Upon some the rust is not only coarse and loose but also of a pitted or tuber-

cular character, while upon others the hydroxide covering approximates the protective characteristics of those on the relatively permanent metals.

Some examples of very ancient irons have come down to us in a good state of preservation, thus evincing a degree of rust-resistance that is probably possessed by few, if any, of the modern products. A famous example is that of the iron statue or pillar at Delhi, India, which is almost unharmed by twenty-eight centuries of exposure.

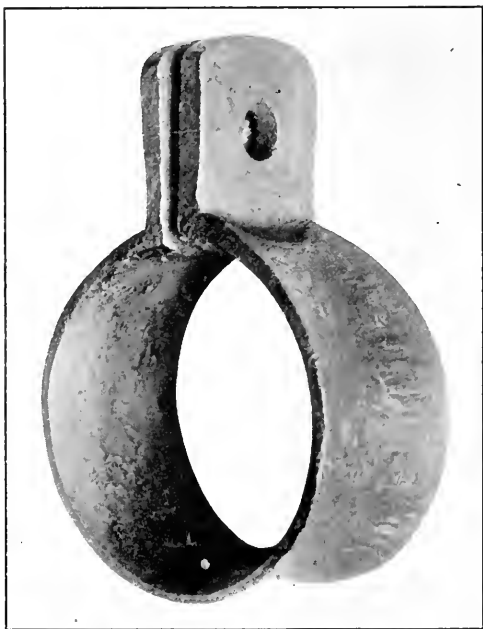


Fig. 1. An iron band taken from a British cannon in use during the American Revolution. Very slightly damaged by rust after long experience.

Everyone is familiar with the remarkable rust-resistance of the old-fashioned hand-forged irons of a hundred years ago. Numerous bolts, links, nails, and chains have come down to us from that period, having undergone constant exposure to the weather or the soil, with but slight damage. Some of the old nails which have been giving service for two

hundred years and more upon buildings erected in Colonial times would serve excellently in connection with new construction, whereas many of us are familiar with buildings put up during our own time whereon the modern nails have rusted to failure.

The resources of modern science have been brought to bear on the problems of corrosion. Since the beginning of the twentieth century exhaustive studies have been made by chemists and metallurgists of world-wide reputation, these investigations involving numerous chemical analyses and physical tests on the old and durable irons as well as the modern commercial metals. The result has been the establishment of the electrolytic nature of corrosion. A practical statement is that the laws which govern iron and steel corrosion are the same as those of the electric battery and all electro-chemical action. Any substance differing from iron when exposed on the surface of the metal may, in the presence of air and moisture, form with the iron a galvanic couple similar to that formed by the two metals of the familiar electric battery. The activity of such a battery involves the progressive corrosion of the more positive element. Thus the principal cause of the rusting of iron is the presence of impurities.

Differences of physical structure or condition in various portions of a metal surface may act like chemical differences to promote corrosion, and for the same reason, since they produce marked differences of electro-potential and are thus the basis of electrolytic action.

"Segregation. — Evidently anything that increases the electrolytic activity will increase the attack by hydrogen and therefore the formation of rust. Unfortunately even the purest piece of iron will show differences of electric potential at different parts and therefore produce an electrolytic effect. When the metal is impure or is badly segregated, these differences in potential will be quite large, and when several pieces of steel are joined together, as in a bridge or other structure, the difference in potential between the different parts may be great. It is probable that each of the

different microscopic constituents of iron and steel has a different electric potential and therefore either assists or retards the progress of rusting. Also scale, the slag in wrought iron, etc."—B. Stoughton, "The Metallurgy of Iron and Steel."

The superior durability of wrought iron has been attributed by some to structural characteristics. The statement is made that wrought iron is of a fibrous or ropy structure and that areas of iron are enclosed in protective coatings of slag. The term "fibrous" is a misnomer, since wrought iron, like all the other ferrous metals, is basically crystalline. The slag content which is its principal impurity is drawn out into long shreds or streaks by the processes of hammering and rolling, and it is these which give rise to the wide spread opinion as to its rope-like structure. There is no doubt whatever that wrought iron of high quality is remarkably resistant to rust, but modern investigations point to the comparative absence of manganese, sulphur and carbon in thoroughly well-made wrought irons as the cause of this superiority.

"Badly Made Material.—There can be no doubt that badly made steel is much more liable to corrosion and to pitting than well-made steel, and it may be from this cause that the bad name which steel is popularly given comes. There can also be no doubt that badly made wrought iron is extraordinarily subject to rusting, and of this kind of material

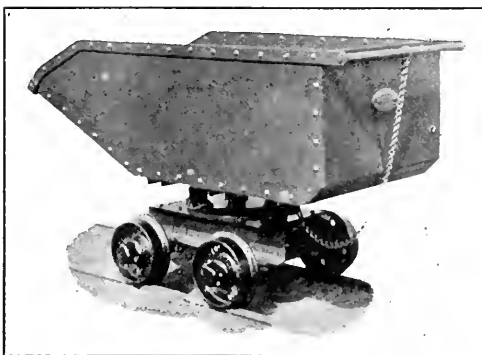


Fig. 2. Dump Car, made from open-hearth pure iron (Armco Iron), used in industrial plants where fumes and acids are destructive of ordinary metal.

we are today getting a good deal. * * * Probably more than half of the wrought iron produced in America is made by 'busheling' scrap into a pile, rolling it down and marketing it as wrought iron. This material is of good quality so long as the scrap from which it is made is good, but when the scrap is collected from almost any source, and especially when it contains steel, as it sometimes does, we should expect great differences in potential and therefore rapid corrosion."—Stoughton.

The most practical result of modern scientific research in this department of industry is the development of pure iron as produced in the open hearth furnace. During the past ten years it has been possible to procure an iron made by adaptations and elaborations of the open hearth methods in which carbon, manganese, sulphur, and all other impurities have been reduced to a surprisingly low percentage. The expectations raised on the theoretical basis above outlined are apparently fully justified by the service given by this modern product under conditions of exposure. In the nature of the case no such periods of service can be adduced as those which have made the well-deserved reputation of old-fashioned pure iron, but a direct comparison between the best known of modern open hearth irons and ordinary commercial metal in situations favorable to very rapid rusting leads to the conclusion that the new pure iron will afford from two to four times the length of service and perhaps fully equal that of the product of Colonial times. Exposed surfaces do certainly acquire a coating of rust, but this is so fine and closely adherent as to constitute the nearest approach shown, by any member of the iron family, to the protective oxidation of silver and lead.

Sufficient data has already been accumulated, however, to establish the fact that purity, in respect to the solid ingredients usually measured by chemical analysis, is not enough to insure long life to exposed metal. Gaseous inclusions are of peculiarly vicious effect and if the new material is to be successful it must be jealously guarded in this respect. A high degree of skill and care

are necessary to produce a solid and dense material free from the tiny gas bubbles which are the bane of much of the output of modern furnaces.



Fig. 3. Eight-inch defective sheet bar showing heavy seams in surface. Rigid inspection and the rejection of all bars and sheets showing even slight imperfections are necessary in the production of durable iron.

The fairly complete elimination of gases confers other qualities upon the finished metal scarcely less valuable than high rust-resistance. Included gases constitute the principal difficulty in the use of iron or steel as a base for enameling. Super-purification in this respect results in a highly superior product for this purpose and one upon which the enameled surface can be brought to the highest perfection.

Welding operations also are more readily and more perfectly performed with highly purified iron than with more uneven material. Unevenness constitutes the greatest difficulty in the securing of perfect welds. If the material has some portions harder or softer than the rest or with varying proportions of carbon, manganese, and other impurities, the softening of the two surfaces to be joined will vary at different points, resulting in an imperfect and unreliable weld. Open hearth pure iron has some peculiarities by which it differs widely from steel and these make some modifications of welding methods necessary. When these are once understood, however, welding is very readily and surely accomplished.

Another interesting quality conferred by high purity and evenness is that of increased electrical conductivity. The very pure wrought irons of Scandinavia

have been largely employed in connection with electrical industry because of this quality. They are fully equalled, however, by the pure iron made in the open hearth furnace, and the latter is procurable at a much lower price.

The production of pure iron by the new processes is emphatically a business for an organization which places quality ahead of tonnage. Careless handling in any one of the several processes through which the iron passes after leaving the furnace, may offset all the results of the utmost care given to purification. A constant and rigid inspection at all stages and the unvarying rejection of imperfect bars and sheets is a factor of the utmost importance. The ideal in the finished product is the highest attainable purity coupled with physical evenness and perfection of surface and of internal structure.

SOUTHERN PACIFIC COMPANY'S NEW FOLDER.

An illustrated folder, "Four Gateways to the Pacific Coast," has just been issued by the passenger department of the Southern Pacific Company. The new publication gives a description of the Southern Pacific routes through New Orleans, Ogden, Portland and El Paso, and the text is set off with no less than eighty fine engravings. A prominent feature of the folder, and an innovation in this field of advertising, is a graphic two-color map which shows at a glance the scenic and other attractions of the western country, bearing out the slogan, "All the Pacific Coast Is a Show Place." This map is illustrated with eighty-three inset pictures.

Representation is given to all the States traversed by the Sunset, Ogden, Shasta and El Paso routes of the Southern Pacific, and a special section displays the varied charms of California. Space is devoted to the Panama-California International Exposition, San Diego, 1916, with views of the buildings and grounds.

The new folder is attractively printed in orange and black. Its whole design and arrangement is calculated to appeal to the tourist, and the publication is to be given wide distribution throughout the East.

SENSIBLE SPEED SIGNS

The Automobile Club of Marietta, Ohio, has placed signs at the city limits that embody the new idea in municipal government, that the people should be asked to act in a sensible manner rather than to be continually met with the words, "Thou Shalt Not."

As the automobile driver approaches the city he is met with the sign below:

WELCOME
PLEASE
SLOW DOWN
MARIETTA
AUTO. CLUB

As he is leaving the city the sign he sees takes it for granted that he has complied with all rules in regard to speed, thanks him for doing so, and extends an invitation to come again. This side of the sign reads as follows:

THANK YOU!
COME AGAIN.

Municipal officials ought to remember that after all they are representing the public, that they are in the employ of the public and that the people are paying them their wages. Better results will be obtained under every condition if the people are treated as intelligent beings and are asked to do things rather than commanded.

FIRE APPARATUS FOR SALE

One combination Chemical and Hose Wagon, Horse Drawn. In first class condition, lately painted and varnished. Equipped with one 40-gallon chemical tank, 150 feet chemical hose, 2 axes, 2 lanterns, 1 8-inch bell (brass), 1 ladder rack, 1 tool box, 1 chemical hose basket, harness hangers and drops. Price, \$400.00. Terms if desired. Can be seen at Town Hall, San Anselmo, Cal., or correspond with Arthur W. Studley, Town Clerk, San Anselmo.

∴ ∴ EDITORIAL ∴ ∴

THE LAST WORD REGARDING MUNICIPAL ELECTIONS.

Any one who has attempted to digest the election laws with reference to their bearing on elections in sixth class cities will agree that these laws are in a very confused state, and their interpretation is almost as much a matter of guesswork as anything else. A number of provisions are in absolute conflict with one another and it is only by deduction and inference that any head or tail can be made of them. Suggestions have been received from various sources that the League Committee on New Legislation prepare a separate election law for cities of the fifth and sixth class. Beyond any doubt this will be done.

The question of interpretation was submitted to the Attorney-General's office with the result that the conclusions arrived at in reference to the principal matters connected with the election are as follows:

1. No one can lawfully vote at the election to be held April 10, 1916, except those who have registered between January 1 and March 10, 1916.

2. Nomination papers may be filed with the city clerk not earlier than fifty days nor later than twenty days before the day of election, consequently March 21 is the last day for filing nomination papers with the city clerk.

3. The county clerk has five days in which to examine nomination papers, consequently they should be left with him not later than March 15 in order to get them back in time to file with the city clerk by March 21. Certificates appointing verification deputies should be filed with the county clerk at the time of leaving nomination papers.

ADVICE TO NEW TRUSTEES.

The election of new trustees is followed here and there by the appointment of new administrative officers such as attorney, engineer and street super-

intendent. Unfortunately for the city's concern these changes are sometimes made for political considerations. We earnestly hope that the newly elected trustees will consider long and well before removing the administrative officers solely for political reasons. Politics is the curse of municipal government in the United States. So long as experienced men are removed and inexperienced men appointed to their places for political considerations, so long will municipal government continue to be a failure as compared with the government of private corporations. It takes a number of years to make a good city attorney out of the average lawyer regardless of how well he may be qualified as a general practitioner. As an illustration it will probably be found that many contractors know more about street laws than the average lawyer who is not employed in municipal work. Consequently, when a new board of trustees, for some private reason, will remove an experienced city attorney otherwise well qualified, they are making a serious mistake and one that oftentimes proves expensive. The same arguments that apply to the retention of a good attorney, also apply to a good city engineer and a good street superintendent. It takes several years of experience before they become valuable to the city, and to remove them from office merely because they didn't happen to be endorsed by the winning faction or for some other trifling cause is a great mistake. Therefore we respectfully urge the new trustees to subvert their private views or objections for the good of the municipality. Do not discharge a good engineer or street superintendent simply because you don't like him. If he is a good engineer and understands his business, he should be retained, if his retention is to the best interests of the city. In order to attain successful municipal government we must eliminate all politics and apply business principles. The man "who

knows how" is not always the most popular man, but he is the man who can serve the people best, and even if you don't agree with him on other questions, consider well before putting in a new and untried man in his place. Such a course is the only one you can follow in your line of duty, and which is in moral accord with the oath of office which every newly elected official must take. The interests of the whole State of California are directly involved in the cause of good municipal government. We have the reputation of being further advanced in municipal government than any other State in the Union. We want to retain that reputation. Therefore, in this respect California expects every newly elected city official "will do his duty."

ECONOMY IN MUNICIPAL GOVERNMENT.

A recent candidate for city councilman in one of our large cities made the statement in his campaign speeches that the administration of private business was necessarily different from the administration of government, for the reason that the former was run for profit, whereas the latter was not. Such a statement is misleading if not absolutely untrue, as it gives the intimation that rigid economy is necessary in the running of a successful business, but has no place in the running of municipal government. As a matter of fact, the same principles which apply to one are equally applicable to the other. A city council in its relations to the municipality may very properly be said to correspond with the board of directors of a private corporation, and is under the same obligation to their stockholders (the people), to give them the maximum of benefit at the minimum of cost; and the public funds should be just as jealously guarded with the idea that low taxes in the one case are equivalent to dividends in the other.

It frequently happens, however, that in their anxiety to economize and cut down expenses a city council sometimes makes the mistake of "saving at the spigot and losing at the bung-hole." For example, it is often found that newly

elected trustees are imbued with the idea that a town may dispense with the employment of an attorney or engineer, or that the salary of the city clerk or street superintendent might be reduced. It is a wise plan for the new officials to thoroughly investigate the matter before indulging in propositions of this kind, as it is a common error to underestimate the amount of work which is required of administrative officers, even in many of our small cities. The recent legislation has greatly added to the amount of work required of the city clerk. In order to make the official reports to the State Controller which are now required under a recent statute, the city clerk is obliged to keep additional accounts so as to be able to make this report in the manner specified by the law. The use of the street laws also puts additional work on the city clerk, specially where local improvement bonds are issued. It takes several years training to make a good clerk, and when a good one is secured it is a good policy to retain him or her as long as possible. The same argument applies to every administrative officer.

"Penny wise and pound foolish" policies have invariably proved expensive when applied to the administration of municipal government and a number of cases which have occurred in California should serve as a warning to councilmen who may be inclined to dispense with officials or reduce their salaries without first considering the matter with great care.

About ten years ago a small town located not far from San Francisco was persuaded to advertise and sell a franchise to supply the town and its inhabitants with water. The city council at that time indulged in the economy of dispensing with a city attorney, else they would have been informed that their procedure was unlawful. However, they proceeded to sell the franchise, and the successful bidder offered in writing to pay the town nearly eight per cent of his gross receipts. The system was constructed and finally the time arrived for the town to receive its share of the gross receipts. Instead of money, however, various excuses were given. At last after

many thousands of dollars were owing the town in the matter, the matter was taken to the Supreme Court where the franchise was promptly declared invalid. Here is an illustration by which a town lost an amount equivalent to ten times the salary of a city attorney. Another illustration of a "penny wise and pound foolish" policy occurred in the case of a small town in the southern part of the State over a bond issue. The trustees were of the opinion that it would be necessary to have the bonds carry six per cent interest. The city attorney had conferred with attorneys who specialized in supervising bond proceedings who agreed to prepare all the papers with complete instructions, supervise the proceedings and guarantee the sale of the bonds on a five and one-half per cent basis for \$250. The trustees refused to listen to the idea of employing associate counsel for a such a large(?) fee, but said they were quite willing to make the interest six per cent and sell the bonds at par. The difference of one-half of one per cent in this case amounted to something like \$1,700, hence we have a case here where the city council, in order to save an attorney's fee of \$250, was willing to sacrifice over \$1,700 in interest. It is interesting to add that they proceeded with the election and had the bonds turned down on account of a technical defect in the proceedings.

Another small town in the State recently indulged in the luxury of having its official grades established by students of an engineering school who happened to be camping in the vicinity. It didn't cost them anything, but that remains to

be seen. We could go on with a great many of these illustrations, but those above quoted will suffice. It is a serious mistake for a town to hire one professional man in preference to another, simply because one is cheaper, whereas the other demands a reasonable fee. Experience proves that in nearly every case the so-called cheap man is the dearest in the end. The slowest towns generally pay the smallest compensation to their officials. Undoubtedly that is one of the contributing factors to their slow progress. There are one or two sixth class cities in the State which are paying their city attorney as low as \$10 a month, and the trustees of those towns undoubtedly feel that the money is wasted. A few sixth class cities pay their attorneys \$100 a month and feel they are getting value received. One of them has had the same attorney for nearly twenty years. He has the reputation of being one of the best authorities on municipal corporation law in California and the municipality he serves is one of the most progressive in the State. Do not get the impression that town attorneys are overpaid. The town attorney occupies one of the most important offices of the municipality. A single error may cost the town many times his salary.

If you have good administrative officers, and they show an anxiety to do their work well, you will do a wise thing to retain them. It takes a big man to say, "Personally I don't like that fellow, but he is certainly a good town clerk, therefore I'll not vote to fire him." The cause of good municipal government needs big men who can take such a stand.

WE ARE IN THE
MARKET FOR

MUNICIPAL BONDS

Also for IMPROVEMENT BONDS Issued Under the New California

"IMPROVEMENT BOND ACT OF 1915"

LUMBERMENS TRUST COMPANY

OF PORTLAND, OREGON CAPITAL AND SURPLUS \$600,000

GILBERT W. SMITH,
Manager San Francisco Office

1002 First National Bank Building
SAN FRANCISCO, CAL.

CORRESPONDENCE SOLICITED

Cameron Septic Tank Co. Claims

(Further Correspondence.)

February 21, 1916.

Cameron Septic Tank Company,
Monadnock Block,
Chicago, Ill.
(Attention Mr. W. D. Wyllie, Mgr.)
Gentlemen:

Your letter of February 17 with enclosures duly received. As we understand it, from your contention, the infringement of any one of your claims constitutes an infringement of the patent; however, there is one phase of the matter upon which we wish more light. The situation is as follows:

In many towns the septic tank (so-called) consists of nothing more or less than a large cesspool which, it may be admitted for the sake of argument, works as successfully as a tank constructed on your specifications. Nevertheless, such a so-called septic tank is nothing more or less than an ordinary cesspool usually constructed by individual property owners living on farms, or in small towns which have no sewer system. It appears to us that no distinction can be raised between a small cesspool used by an individual property owner and a large one used by a number of property owners. Under these circumstances, we do not see how you can hope to sustain a claim that the construction and use of the tank feature alone constitutes an infringement, as cesspools have been in use so long that "the memory of man runneth not to the contrary." In other words, the situation appears to us as follows: An individual property owner may construct a cesspool for his own use from which the effluent may seep into the ground or run into a stream, but should a town construct such a cesspool

to accommodate all the property owners it will infringe your patent. That is the point upon which we want more light, to-wit: The distinction raised by your company as between an ordinary cesspool accommodating an individual property owner and a large cesspool accommodating a great number of owners. If the large cesspool infringes your patent, surely the small one does also.

We are inclined to think that the municipalities of California will be disposed to resist your claim for royalty in such cases as those where the town makes use of nothing more or less than a large cesspool, for the reasons aforesaid, unless, of course, we are otherwise advised by our attorneys. Upon receipt of your reply, we will immediately submit the entire matter to a committee of city attorneys for their consideration.

Yours respectfully,

LEAGUE OF CALIFORNIA MUNICIPALITIES,
Per W. J. LOCKE,
Executive Secretary.

Chicago, Ill., February 25, 1916.

Mr. Wm. J. Locke,

Executive Secretary,

League of California Municipalities,
Pacific Bldg., San Francisco, Cal.

Dear Sir:

We note further inquiry contained in your favor of the 21st inst.

A mere cesspool is not a septic tank or a septic process pool, no matter what its size. The paragraph at the eighth line of the third page of our last letter substantially answers your question, especially when read in connection with the preceding and following paragraphs. There is one aspect of the matter of size

that should be borne in mind, and that is that often mere cesspools of small size may be tolerated because their offensiveness can be isolated by having them a little remote from a dwelling, but a very large cesspool, to receive the whole of the sewage of a community, is offensive on such a large scale that it is ordinarily not feasible to sufficiently isolate it. And so when a community sewage pool is so arranged as not to be intolerably offensive, it will probably be found that provision has actually been made to continuously carry off enough effluent to prevent the stagnation that occurs in a mere cesspool, and that in adapting the proportions of pool and outflow to the large volume of community sewage a leaf has been taken from the lessons learned in practicing the septic process, to avoid the nuisance on a large scale that would result from a mere multiplying of small cesspools. In any specific case, of the use of "natural depressions" you referred to, where the definite facts of proportionate volume and inflow and necessary outflow are put before us we can probably determine whether there is a mere cesspool or an employment of the septic process. But as stated in our previous letter, the mere fact that the effluent from a tank or pool passes directly into a water course or into an absorbent bed, does not of itself preclude that tank or pool from being one employing the septic process under one or all of those of our process claims that do not expressly require a subsequent special aerating or filtering step, for each and all of the process claims were sustained when our patent was sustained, and, of course, infringement of any one of them is infringement of the patent. Of course, mere cesspools have always been known, but not the septic process pool defined in our process claims, independently of the further aerating and fil-

tering steps specified in only some of these claims.

Hoping that this may serve to clear the further detail your last letter mentions, we remain

Yours very truly,

CAMERON SEPTIC TANK COMPANY.

HBW/GR

H. D. WYLLIE.

CALL FOR A CONFERENCE.

To Whom It May Concern:

At the request of a large number of interested parties, the League of Iowa Municipalities has called a conference, at the Savary Hotel, Des Moines, Iowa, Tuesday, March 14, at 10 o'clock a. m., of all those interested in the threatened suits by the Cameron Septic Tank Company for infringements of their patents by the installment of sewage disposal plants.

The object of this meeting is to thoroughly discuss all sides of the septic tank situation, to decide on a plan of action and to take such action as the delegates in attendance to the meeting shall decide.

You are cordially invited to be present at such meeting or to have a representative present. If for any reason you are unable to attend, we will appreciate it very much if you will fill out the enclosed blank and have it in the hands of the acting secretary not later than March 12th.

We will be pleased to hear from you and to have your ideas as to what should be done under the present conditions.

Yours very truly,

LEAGUE OF IOWA MUNICIPALITIES.

J. F. COLE, President,

F. G. PIERCE, Secretary.

San Francisco, March 7, 1916.
Mr. Frank G. Pierce, Secretary,
League of Iowa Municipalities,
Marshalltown, Iowa.

Dear Sir:

This is to acknowledge receipt of your recent invitation to attend a conference

at the Savery Hotel, Des Moines, Tuesday, March 14, 10 o'clock a. m., for the purpose of considering the threatened suits of the Cameron Septic Tank Company for alleged infringement of their patent.

About three years ago this company was very active in making demands on various cities and towns throughout this State as a result of which a special committee was appointed and a special assessment levied to contest their claims. The Cameron company apparently abandoned the fight at that time and we heard no more about their claims until quite recently.

On January 10 we wrote to the city attorney of Winchester, Ky., who was one of the attorneys for that city in the

suit which resulted favorably for the Cameron company, but no reply has been received to this letter. It is intimated that the recent Winchester case was a frame-up. In any case, the municipalities of California would not be disposed to pay any royalties to the Cameron company until satisfied beyond a reasonable doubt of the company's right to such royalty. Kindly notify us at your earliest convenience of the action taken by the conference held at Des Moines. You may count on our unqualified support.

Yours very truly,

LEAGUE OF CALIFORNIA MUNICIPALITIES.

Per WM. J. LOCKE,

Executive Secretary.

MOUNT SHASTA

AND THE

SISKIYOU

"SHASTA ROUTE"

SOUTHERN PACIFIC

FIRST IN SAFETY

Through the most magnificent mountain scenery in America. From Siskiyou's glorious summit looking southward on California's peaks and verdant slopes, and northward on Oregon's timbered heights and orchard-checked valleys—a succession of views unequalled in their combination.

FOUR DAILY TRAINS

San Francisco (Ferry Station) to Portland Tacoma and Seattle

"Shasta Limited," Extra Fare \$5, 11:00 A. M.

"Portland Express" 1:00 P. M.

"Oregon Express" 8:20 P. M.

"Sound Special" 11:40 P. M.

Best Dining Car in America

Oil-burning Engines—No Cinders, No Smudge, No annoying Smoke. Awarded Grand Prize for Railway Track, Equipment, Motive Power and Safety Appliances, San Francisco Exposition, 1915.

RICHMOND'S NEW MILK ORDINANCE

Richmond, Cal., February 17, 1916.
 Wm. J. Locke,
 California League of Municipalities,
 Pacific Building,
 San Francisco, Cal.

Dear Sir:

In reply to your letter of the 16th inst. in regard to the new milk ordinance which we sent you, will say that if you consider it of sufficient value to give it space in your valuable journal, we would feel greatly complimented.

In commenting on the same will say that we have left out everything regarding bacteriological count, as that is taken care of by the new State law that goes into effect next October. The State law exempts milk of tuberculin tested cows from being pasteurized, but we require all milk to be pasteurized, as from our experience, typhoid fever and other diseases can as well be transmitted from the milk of tuberculin tested cows as from those that are not tested.

Regarding the percentage or grading of milk dealers which you speak of, that would seem hardly practicable in a fairly large city, as to be fair with the dealer you would have to test his milk every day in order to give him the proper percentage at the end of each month.

Our system here is to put the result of the milk examinations each month upon a large bulletin board in the city hall, and also to have the report published in the three daily newspapers in this city. We have found this brings better results than by any other method. We tried having dealers arrested, but that did not work well for it is very hard to bring proof of everything that is necessary, such as how you got the milk, who took it to the laboratory, and if it was properly sealed, etc., etc., all of which little technicalities the milkman's lawyer will take advantage.

Another feature of the ordinance is the daylight delivery, which we think is very commendable, because we believe that the milk can just as well be delivered in the day time as by night.

Yours very truly,

CHAS. R. BLAKE, M. D.,
 Commissioner of Health.

ORDINANCE No. 398.

An ordinance to prevent the sale of impure and unwholesome milk, to provide rules and regulations therefor, in the City of Richmond, and to prescribe penalties for the violation of the provisions thereof.

The council of the City of Richmond do ordain as follows:

All milk must be pasteurized—Section 1. It shall be unlawful for any person, firm or corporation, except in bulk to the wholesale trade, to sell or exchange, or offer or expose for sale or exchange, for human consumption, in the City of Richmond, any milk from cows, until it has been pasteurized by the holding process at a temperature of not less than 140 degrees Fahrenheit for twenty-five minutes; provided, that milk for drinking purposes shall not be heated above 145 degrees Fahrenheit.

Milk in food products must be pasteurized—It shall further be unlawful for any person, firm or corporation, to sell, or exchange, or offer or expose for sale, or exchange, in the City of Richmond, any milk products except cheese, into the composition of which any milk enters otherwise than permitted in this section of this ordinance, to be sold at retail. For the purposes of this ordinance, milk shall be construed to include cream.

Per cent of solids and butter fat—temperature of milk—Section 2. Milk from cows shall contain not less than eight and five-tenths per cent solids not fat, nor less than three and two-tenths per cent butter fat, nor shall the temperature be higher than 65 degrees Fahrenheit; all milk the temperature of which is found on examination or test to be above 65 degrees Fahrenheit shall be confiscated, forfeited and immediately destroyed, by or under the direction of the Commissioner of Health.

Pasteurization rules—Section 3. Milk for pasteurization must be kept at a temperature of not more than 65 degrees Fahrenheit up to the time of delivery to the pasteurizing plant, and rapidly cooled after pasteurization to a temperature of 50 degrees Fahrenheit, or below, and so maintained to the time of delivery of the same. Pasteurization shall be by the holding method at a temperature of not less than 140 degrees Fahrenheit; provided, that milk for drinking purposes shall not be heated to a temperature above 145 degrees Fahrenheit.

Pasteurizing plants—All pasteurizing plants shall be equipped with a self-registering device, approved by the Commissioner of Health, for record of the time and temperature of the pasteurization.

Records to be kept—Such records shall be kept for two months, and shall be available for inspection by the Health Department of the City of Richmond, the State Veterinarian or any of his agents, or the State Dairy Bureau.

Milk to be marked—Pasteurized milk shall be marked with the day of the week of pasteurization, and must be delivered to the consumer within forty-eight hours thereafter.

Re-pasteurized milk—If milk is re-pasteurized, it must not be sold except as not suitable for human consumption.

Milk not suitable for human consumption—Section 4. Milk not suitable for human consumption may be sold for industrial purposes; provided, it be heated to a higher temperature than necessary for pasteurization and delivered in a distinctive container plainly marked with the words "Not Suitable for Human Consumption," in letters not less than one-fourth of an inch in length and one-twelfth inch stroke.

All milk must be delivered in sealed containers—When and where to be sealed—Section 5. No person or dealer in milk or milk products, and no employee or agent of such dealer in milk or milk products, except such as may sell for consumption upon the premises where sold, shall give, furnish, sell, offer for sale, or deliver any milk, buttermilk, skimmed milk, sour milk, whey or cream in quantities of less than one gallon, unless the same be kept, offered for sale, exposed for sale, sold or delivered in sanitary, transparent glass bottles or such other receptacles of similar character as may be approved by the Commissioner of Health; the same to be sealed with a suitable cap or stopper. The said bottles or other receptacles shall be sealed immediately after the filling of the same, which filling and sealing shall be done only in a milk house or creamery, the sanitary condition of which has been approved by the Commissioner of Health.

Milk must not be handled in exposed places—Section 6. No person shall transfer any milk from any can, bottle or receptacle on any street, alley or thoroughfare, or upon a delivery wagon or other vehicle, or in any exposed place in the City of Richmond, except in a milk house or creamery, the sanitary condition of which has been approved by the Commissioner of Health.

Disease in dwellings—bottles not to be removed—Section 7. No person shall remove from any dwelling in which exists any case of communicable disease, any bottles or other receptacles which have been, or which are to be, used for containing or storing milk, skimmed milk, buttermilk, sour milk, whey, cream or other milk product, except with the permission of the Commissioner of Health.

All milk containers must be washed and sterilized—Section 8. It shall be unlawful

for any person, firm or corporation, either by themselves, their agents or employees, to sell, offer for sale, expose for sale, or have on hand for sale, any milk, cream or other milk product which has come in contact with any utensils or apparatus that has not been thoroughly washed and sterilized by the use of boiling water or steam, or other proper agent after each using, or to offer for sale, expose for sale or have on hand for sale, any milk, cream or other milk product, in any cans, jars, bottles, measures or other vessels or containers, unless they have been thoroughly washed and sterilized by the use of boiling water, steam or other proper agent.

Consumers must wash containers—It shall further be unlawful for any person, firm or corporation, to return or deliver, or to cause or permit to be sent, shipped, returned or delivered to any producer, dealer or distributor of milk or cream, any can, jar, bottle, measure, or other vessel used as a container of milk, skimmed milk, buttermilk, sour milk, whey or cream, without first rinsing the milk or cream from same and thoroughly washing the same in hot water.

Health Commissioner to enforce ordinance—Section 9. It shall be the duty of the Commissioner of Health with such assistants as necessary, to enforce all of the provisions of this ordinance, and said Commissioner of Health is hereby empowered to make such rules and regulations as may be necessary and advisable for such enforcement.

Certified milk not affected—Section 10. Nothing in this ordinance shall be construed as pertaining to, or regulating, the sale of what is known as "Certified Milk."

Unlawful to deliver between 8 p. m. and 6 a. m.—Section 11. It shall be unlawful for any person, firm or corporation to sell, distribute or deliver any milk at retail in the City of Richmond, except at a fixed place of business, between the hours of 8 o'clock p. m. and 6 o'clock a. m. of the following day.

Penal clause—Section 12. Any person who shall violate any of the provisions of this ordinance shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than twenty-five dollars (\$25), nor more than two hundred dollars (\$200), or by imprisonment in the city or county jail for a period of not less than ten (10) days nor more than sixty (60) days, or by both such fine and imprisonment.

Repealing clause—Section 13. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

When take effect—Section 14. This ordinance shall take effect and be in force on and after the first day of April, 1916.

THE SLANDERERS OF THE CITY

(Baltimore Municipal Journal.)

Why is it that some people seem to have an inclination at all times to find an excuse for saying ugly things about their city government?

Nobody doubts the propriety of sound criticism. Nobody doubts the propriety of caustic denunciation if the facts justify the attack. But sound or justifiable criticism is not the kind that is always the most prevalent.

If the "nasty" things uttered by some people were the outgrowth of realities within the lines of the municipal government, there would be good reason for praising those who make the exposure. But when persons deliberately make statements which they know to be false; when they plunge into other statements which they have not previously verified—they do their community a fearful injury. Every time they ruthlessly and maliciously malign their municipal government they stab the reputation of the city in which they live.

There are persons of this malicious type in every city. They trot around town making speeches, or they fill columns of newspapers with effusions of their brain—much of which shows a lamentable ignorance as to the facts or a reprehensible disregard of the truth. They seem to think that all they have to do is to make a lunge at the city government and they will appear heroic in the public eye.

It is a shame that free speech should be so far abused as to become the vehicle for slanderous fabrications. A man who deals in facts, who carries to the attention of others a cargo of nothing but truth, is a valuable minister to the public welfare. But if a blatant tongue runs

wild with the utterance of senseless extravagancies or if it turns to the invention of inexcusable lies—then that tongue becomes a public curse. It is fit for nothing but public contempt.

It is strange how some persons will indulge in reckless statements about matters of municipal concern. As a matter of caution they would not dare do the same if the object of attack were a private one. They have no hesitancy in leveling slanderous, though groundless, criticism at their city government. They seem to glory in saying things about municipal matters which are literally dripping with malignant falsity. Indeed, it is a living shame that so small a measure of truth and so large a measure of untruth should be circulated by some elements relative to their city government.

It is the consciousness of irresponsibility which seems to loosen up some tongues and to give extra nimbleness to some pens. Could the tongue or pen be made to feel that malice or false utterance would be likely to tumble the guilty one into court, there would be far less ugliness of statement and far less straining in the direction of deception.

It is so easy to be semi-sensational before people who are ignorant of the facts or who are so indifferent in their habits that they do not bother about facts. Any old thing goes before persons like that. And the absence of challenge, where these misstatements are made, leads many into the belief that the misstatements are true. That is the misfortune of it all. A conscienceless tongue or a gall-dipped pen will frame an utterance reeking with falsehood.

Many will accept it as true simply because there is no specific denial leveled against it. The silence of city officials is oftentimes construed as an admission of truth. As a matter of fact, if the officials were to spend their time contradicting half of the inaccuracies uttered about them and their work, they would have no time left to devote to their public duties.

That is why the city scandal-monger is as bold as he is. He realizes that nine times out of ten the city official will not bother himself or bother the public with formal contradictions. He feels that nine times out of ten the official involved will not even hear of the vicious misrepresentations made. Hence, the sense of security with which he makes statements that are at such wide variance with the facts. Were the statements and their inferences compared with the realities and their results, it would make the man who falsified the truth appear wicked in a measure of his inexcusable malignity.

It is all right at any time to fire the heaviest artillery of criticism against the city government if that artillery is loaded with provable facts. Criticism of this type is valuable and wholesome. The more of it, the better. No honest man is afraid of honest criticism. But the best of men and the best of work can be victimized by the liar's tongue or by the falsifier's pen. The purest and sweetest of women can be made to suffer from the black poison of groundless slander. It is the "nasty" word which does the damage, regardless of the verity of the word itself.

That is why citizens of any city—that is, those who want to be classified as "decent"—should treat their municipality with the same consideration that they treat a private person. Give credit where credit is due. Do not abuse unless you know your abuse is suscepti-

ble of detailed proof. Don't denounce anything until the whole proposition is first definitely and clearly understood. Don't be fooled by surface appearances. There are many operations by the city government which, taken singly, seem vulnerable to criticism; and, yet, when they are fully understood in their relations to other matters, they will be found to be both wise and commendable.

A solid business head never flies inconsiderately into an adverse conclusion. The real business man knows too much about the affairs of the world to be fooled by the sharpness of mere words or by the superficialities of one or two isolated facts. He does not pronounce a thing bad until he KNOWS it is bad. He doesn't first call a thing bad and afterward seek facts to prove it. He gets his facts first and sums up his conclusions afterward.

That is the difference between a solid-sensed business man and a blatant-tongued fault-finder. That is the difference between brain and spleen. That is the difference between the exemplar of truth and the practitioner of falsehood. That is the difference between a high-toned citizen and a common scold.

Now and then this disposition to attack the municipal government and everything appertaining to municipal affairs breaks loose like a fad. When it does break loose those who fall under the spell of the fad plunge into a denunciation of men, measures and machinery. They attack the men because they don't like them personally; they attack the measures because they don't like the men; and they attack the machinery or form of government simply because the government itself is not doing what they want.

Any one of these attacks is all right provided it is fortified with facts or good sense. But the mere utterance of attacks in vitriolic language or the

phrasing of those attacks in filmy generalities is not sufficient to justify the attack. Such attacks deceive rather than enlighten. They lead to wrong conclusions. The effort to deceive results in injury to the public. Deceit causes the public's conclusions to be predicated upon incorrect premises.

No community can be helped in its relations with the city government unless that community is fed upon facts and solid sense.

A liar, be he big or little; be he prominent or obscure; be he an official figure or a private citizen; be he a designing demagogue or a stupid ignoramus, is a public enemy in the fullest sense of the term. The circulation of a deliberately false statement or the use of an adverse statement which the utterer knows not

whether it be true or false, is a most vicious and reprehensible practice. It evidences a bad heart or a bad conscience or both on the part of the utterer. It shows that the false utterance is prompted by some malignant purpose; that it is not intended primarily for the public welfare. It shows that the utterer is so disgustingly unreliable that the public should repudiate him as worthy only of its contempt.

The municipal government is yours. When it is in error criticise it justly. Use your influence to correct its mistakes. Point out ways and means for improvement. But, above all things, remember it is yours, and, in remembering it is yours, be generous and manly enough to play fair with it, to speak honestly of it.

OUR CITY MANAGER

Brief Statement As to What He Is Doing and Good Results of His Activities

There has been some comment relative to San Rafael's experiments with a city manager, and for this reason the *Journal* has made some investigations and gathered some facts showing what he is doing and some of the results of his labor.

The city council about a year ago employed F. J. Boland, a civil engineer and architect, to fill the position of city manager. His employment was somewhat in the nature of an experiment. He was a stranger but came with good recommendations, and he has proven himself to be a faithful and efficient officer, and has won the confidence of the councilmen. His salary was at first fixed at \$150 per month, and was later increased to \$200, with the understanding that in his work he use his own automobile in

his work, and it might be well to state that he makes good use of the machine. During the recent stormy weather he drove his machine as high as 100 miles in one day, looking after city matters, and answering calls when notified that anything was going wrong in any part of the city.

As a result the city's business is now conducted on a business basis, and if any citizen has a complaint or suggestion to offer all that is necessary to do is to notify the city manager and it will receive attention and investigation. Heretofore it was necessary to see one or more of the city officials and get action on the part of the majority of the council before any matter could be given proper attention. Now the city manager takes

hold of the proposition at once and sees that everything is put in order without waiting an action of the council.

The city of San Rafael annually spends \$60,000 or more. Who is there that would allow a private business of that magnitude to be run without a manager who has authority to handle the thousands of questions that come up? A bank or corporation of any kind has its board of directors who give general instructions to a manager and trust him to carry them out.

That is just what San Rafael is now doing. The councilmen act as a board of directors and the city manager carries out the work laid out for him, and makes suggestions for the betterment of the city.

The people of San Rafael are the stockholders, the councilmen the directors, and the city manager is the one who carries out the policy of the council and looks after the many details and directs the movements of those who are working for the city under him. He occupies the same position as a manager for a big corporation.

From our observations we do not hesitate to say that the business of our city was never before so efficiently and so promptly looked after as it is now. It is not now necessary to get the consent of three councilmen before having a minor city matter attended to. The city manager has power to look after it without waiting or pulling political strings to have every day details looked after. The city manager has control over all city employes (except elective officers) and can suspend any of them, or employ any extra help needed. He acts as purchasing agent for the city, and all supplies must be purchased through him, and it is his business to see that the price is right.

The salary of \$200 per month which

the city pays the manager has not proven to be an expense, as he is able to save that amount in other expenditures. He does the work of city engineer and in this way saves a cost of from \$1,000 to \$1,500 per year; he does the building inspection and saves the city from \$300 to \$500 per year; he does the work of superintendent of streets and saves a salary of \$300; and he saves the architects fees which at times is a material sum; he saves the cost of inspector on city work, and in many other ways saves money for the city.

The city councilmen, who receive a salary of nothing per year, are relieved of many burdens and responsibilities by having a city manager, and this is no small matter.

San Rafael is one of fifty-six cities in the United States that has a city manager, and from the best information we have been able to gather every one of them is reaping good results. One of the most notable examples is in the city of Dayton, Ohio, where wonderfully good results have been had. The careful estimate is to the effect that the city manager for San Rafael will not cost the city a cent when the end of the year has been reached. In fact it is believed that many dollars will be saved, and the city will have had a most efficient government. It is difficult for the average citizen to realize the facts, but those who are in close touch with the city's affairs realize the good work being done.

For the first time in the city's history the city has a budget of expenses, which has been prepared and is being adhered to, and at the end of the year the city will be able to show where the money has gone, and what will be needed during the coming year.

The *Journal* has not consulted Manager Boland relative to what we have said, and it is not with any feeling of friendship that we have written these statements. We have done it as a matter of information for our citizens, and as a matter of public policy, feeling that the people should be informed of the facts.—*Marin Journal*.

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda will receive bids March 7 for construction of two-story brick school building. Bids were received February 29 for furnishing Department of Electricity with a lot of wire. The following municipal improvements are contemplated: Improvement of portion of Central avenue with permanent paving, \$100,000; erection of new unit to Lincoln School, \$50,000; erection of addition to Washington School, for which bids are being called for; erection Porter School, \$100,000; widening and improving of Encinal avenue; establishment of new Surf Beach Park.

Albany (Cal.) will call a bond election to purchase property for new school. Bids were received February 21 for steam roller.

Anaheim received bids February 10 for construction of a 6-inch vitrified salt-glazed sewer.

Antioch received bids February 14 for the furnishing of a single two-cylinder attachment liquid chlorine apparatus for sterilization of water supply.

Bakersfield has issued a call for 2,240 trees for Santa Fe district as follows: 20 pecans, 340 sycamore, 50 eucalyptus and 1,685 white elm.

Beaumont citizens are agitating cement sidewalks.

Berkeley has appropriated \$1,200 for playground equipment.

Calxico received bids February 29 for \$5,000 bonds voted for municipal building, \$54,000 bonds voted for extension of water system, \$25,000 bonds voted for sewer system and \$6,000 bonds voted for fire apparatus.

Chico trustees and firemen are discussing purchase of new automobile fire engine. A bond issue may be held in the near future for a sewer system.

Chino has ordered construction of more cement sidewalks. It is planned to hold sewer and road bond election March 15; \$73,000 for street work and \$56,000 for sewers.

Coronado will shortly ask for bids for 500 feet of fire hose.

Dinuba citizens are discussing adequate fire fighting apparatus.

Eagle Rock has passed resolution for improvement of portion of Viola Drive by constructing cement curbs and sidewalks.

El Monte has passed resolution for improvement of portion of Tyler street by grading, paving with oil macadam and constructing curbs and gutters.

Eureka is contemplating bonding city for \$200,000 for street improvements.

Exeter will purchase a fire truck for fire department.

Fairfield will hold a \$48,000 bond election for street improvements March 7.

Fresno received bids February 21 for motor truck.

Glendale is taking preliminary steps for a lot of paving.

Grass Valley is contemplating bond issue for water system. Bids will be received March 18 for constructing Carnegie library.

Hanford trustees have decided to take up the question of paving several streets.

Hermosa Beach is making a campaign for \$10,000 Carnegie library.

Hillsborough received bids March 7 for construction of storm sewer.

Huntington Beach has passed resolution of intention for construction of sewers.

King City has directed city engineer to make survey for a sewer system.

Kingsburg has ordered paving of highway.

Lincoln will shortly call a bond election to vote \$20,000 bonds for street paving.

Lodi will probably establish a municipal shade tree nursery; a tree warden will be appointed.

Los Angeles city council is discussing the building of new jail and receiving hospital building. Flood Control Association has declared in favor of \$3,000,000 bond issue to control floods.

Madera will probably have a \$12,500 library in the near future.

Manhattan Beach has passed resolution for improvement of Twelfth street, Thirteenth street, Manhattan avenue and several alleys by paving, sidewalking and constructing ornamental lighting posts.

Martinez trustees are considering calling of bond issue for paving, providing storm sewers, enlarging city sewer system, water system, electric fire alarm system and auto chemical and hose wagon.

Merced may vote in April on proposition to build an auditorium. An election will be held April 10 to improve sewer system and to motorize the equipment of fire department. Also an election will probably be called to vote \$150,000 for high school.

Modesto will hold a bond issue to vote \$15,000 to motorize fire department. On March 13 election will be held to vote \$200,000 bonds for school purposes.

Monrovia city engineer has suggested building storm drain to cost \$40,000. Citizens are talking of purchasing property and building a municipal club at cost of \$20,000.

Newman is contemplating a lot of street paving.

Oakdale trustees have ordered city attorney to prepare declaration of intention for the paving of F street. Money may be appropriated for purchase of fire truck. A new

jail will probably be built in the near future.

Orland has called a special election to vote \$7,000 bonds for additional room for the civic center.

Oxnard has taken steps for the improvement of several streets.

Pasadena has passed resolution for construction of ornamental lighting system on Bellevue avenue.

Paso Robles city attorney has been ordered to draw up necessary papers authorizing \$4,000 bond issue for fire apparatus.

Placerville will shortly call a \$25,000 bond election for street paving.

Pomona will probably call a \$200,000 bond issue in the near future to repair streets ruined by the recent storm waters.

Portland has authorized purchasing agent to purchase 8,000 feet of electric light cable. Bids will be received March 9 for \$125,000 water bonds.

Red Bluff Woman's Improvement Club and other public spirited citizens are agitating civic improvements, among them being proposition to acquire land for public park. Plans and specifications have been adopted for street lighting system on portion of Main street.

Redding will vote in April on proposition of constructing its own lighting system.

Redondo Beach has passed resolution for improving portion of Lucia Avenue for paving, construction of cement curbs and sidewalks.

Redwood City has passed resolution for improvement of portion of East Brewster avenue by macadamizing and oiling the roadway.

Riverside Chamber of Commerce recommends a bond issue to rebuild bridges destroyed in recent freshet.

Sacramento will receive bids March 9 for one motor driven combined flusher and sprinkler.

San Jacinto may vote \$10,000 bonds for repairing damage done by the floods.

San Juan has passed motion to put in 10-inch corrugated iron culvert on Second street.

San Pedro citizens are advocating bond issue for water plant, grounds and other improvements. A bond issue will probably be called for outfall sewer.

San Rafael city council has ordered plans and specifications for concrete bridges at estimated cost of \$2500.00. Bids were received March 6 for three concrete bridges and a lot of cast iron pipe.

Santa Ana may shortly vote \$25,000 bonds for school purposes. Citizens are discussing construction of municipal auditorium. A bond issue will probably be called to provide city with oil pits, oil heating plant, new roller, two or three automobile trucks and street sweeper.

Sawtelle may vote on purchase of fire apparatus in April.

Seal Beach residents are discussing bond issue for acquisition of water, sewer and street lighting system.

Seattle has passed an ordinance providing for the construction of a \$300,000 gallon standpipe on Beacon Hill and laying of 30-inch main on Spokane street and other streets. Estimated cost about \$30,000.

Selma is investigating cost of pumping plant to be installed at municipal swimming pool. A city hall may be constructed in the near future.

Sonoma is considering acquisition of city water works plant.

Sonora is planning to install fire alarm system and install modern fire apparatus to replace the hand machinery in use at the present time.

South San Francisco is planning an up-to-date fire department, annexation of 200 acres and an entirely new lighting system.

Stockton received bids February 18 for the construction of a storm sewer.

Susanville has voted \$18,000 for improvement of streets and fire alarm system.

Tracy is considering installation of fire alarm system.

Tropico is contemplating bond election for municipal water system.

Tulare is planning a new municipal auditorium.

Turlock received bids February 10 for constructing a Carnegie public library. A \$50,000 election will be held for a high school.

Ukiah is considering erection of new building for the high school.

Whittier has passed an ordinance calling a \$110,000 bond election for acquisition of land for reservoir site, construction of reservoir and pump house, sinking of well, purchase and installation of pumping machinery, electrical equipment, valves, hydrants and pipe for pipe lines.

Willits has passed resolution for improvement of several streets by construction of sidewalks.

Woodland has taken preliminary steps for bonding city for \$60,000 for water and sewer system.

Yreka received bids February 15 for two 50 horsepower standard horizontal tubular boilers.

CALIFORNIA COUNTIES.

Alameda County received bids February 21 for furnishing and installing 80 iron bunks in the county jail.

Butte County will receive bids March 8 for construction of road work on Biggs and Princeton Road. A movement is being made for construction of union high school at Paradise.

Fresno County will receive bids March 8 for road oil in quantities of not less than 60,000 barrels.

Glenn County is raising funds for road from Alder Springs to the top of Black Butte.

Humboldt County citizens are launching a movement for good roads; several mass meetings having been held for that purpose.

Kern County received bids March 6 for paving, grading and construction of bridges on Bakersfield-Glennville Road; also for grading and construction of culverts on Bakersfield-Mojave Road, and grading, paving and construction of culverts on Bakersfield-Taft Road.

Los Angeles County will soon call a \$3,600,000 bond election for the control of flood waters.

Monterey County has had plans and specifications prepared for macadamizing eight miles of Salinas-Monterey Road.

Marin County will receive bids March 7 for clearing, regrading and ditching portion of county road leading from Sausalito to Bolinas.

Mendocino County supervisors are considering plans for the Navarro Bridge.

Napa County will receive bids March 15 for furnishing 60 single booths and 17 ballot boxes.

Plumas County. A new town hall at Taylorsville will soon be started.

Orange County may call a \$175,000 bond election to repair the damage to bridges and

highways during the recent storms. The election will probably be called in May.

Riverside County may vote \$400,000 bonds to repair roads and bridges.

San Mateo County will receive bids March 13 for reconstruction of portion of Colma to Half Moon Bay Road. Bids were received March 6 for construction of reinforced concrete culvert on Brittan avenue.

Santa Barbara County received bids March 6 for constructing reinforced concrete bridge across Zaca Creek. On same date bids will be received for constructing three-hinged reinforced concrete bridge across Gaviote Creek.

Shasta County. State Highway Commission will co-operate with county in building of bridges.

Stanislaus County will receive bids March 14 for constructing siphon on the McHenry Road. On same date bids will be received for construction of one mile of concrete road near Newman.

Tulare County will hold a \$2,000,000 road bond election during the fall.

Ventura County received bids for 75,000 barrels of Portland cement.

Yolo County will hold a \$200,000 election for a courthouse.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Appliances for the protection of street pavement work, prohibiting the interference with. Sacramento, 195-d.

Assessment of property and levy of taxes, providing for. Bakersfield, 196-a; San Bruno, 208-a.

Auctioneers, regulating. Sacramento, 199-e.

Advertising in the public streets or in vehicles with animals, banners, transparencies, framework, or any other device, prohibiting. Sacramento, 212-a.

Buildings, regulating the construction, alteration, removal and repair of. Newman, 216-a.

Barber shops, regulating. Marysville, 191-d.

Business, prohibiting the denunciation or abuse of. Sacramento, 191-e.

Businesses and occupations, licensing. (Amend.). Newman, 195-f; Sierra Madre, 205-a.

Building inspector, creating the office of and prescribing duties. South Pasadena, 199-d.

Bankrupt sales, licensing the business of conducting. Reedley, 203-a.

- Bonds**, providing for the issuance and redemption of. Fullerton, 209-a.
- Clerk and treasurer**, fixing compensation of. San Bruno, 204-a.
- City planning commission**, establishing. Palo Alto, 206-a; Alameda, 206-b; Santa Monica, 210-a.
- Domestic fowls**, prohibiting the trespass of. Reedley, 195-c.
- Dogs**, fixing the limits at which they may run at large. Sierra Co., 198-c.
- Dance**, declaring unlawful upon the pier. Hermosa Beach, 213-b.
- Express business**, licensing. San Anselmo, 214-a.
- Fire department**, establishing. Rialto, 191-a.
- Fire limits**, establishing. Newman, 216-a.
- Food peddlers**, licensing. 199-c.
- Gift enterprise, voting contest, or scheme dependent upon chance in which certain person paying money may receive awards or prizes and others participating likewise may not**, prohibiting. Sacramento, 191-f.
- Garbage, rubbish and waste**, defining and regulating. Sacramento, 201-c; South Pasadena, 203-b; Sacramento, 203-c.
- Gas**, granting the right to place pipes and conduits for the purpose of supplying. Los Banos, 215-a.
- Hypnotic exhibitions**, governing. Los Gatos, 191-c.
- Health laws**. Vallejo, 193-a.
- Health officer**, prescribing the duties of (amend.). Redding, 198-b.
- Highways**, providing for the care, management and construction of. Kings Co., 199-a.
- Intoxicating liquors**, licensing and regulating the sale of. Sacramento, 192-a; Pinole, 209-b.
- Job printing**, fixing the prices of. Butte Co., 197-c.
- Lighting**, ornamental street, adopting specifications for the installation of conduits, posts and lights for. Huntington Beach, 213-a.
- Motor vehicles**, regulating the keeping or standing of on certain streets. Taft, 190-d.
- Nickel-in-the-slot machines**, regulating. Napa, 192-c.
- Officials**, fixing the salary of. Inglewood, 205-b.
- Pool, billiard and bagatelle rooms**, regulating. Santa Cruz, 190-a, 207-a.
- Plumbing and plumbers**, rules and regulations governing. Vallejo, 192-b.
- Public buildings for entertainment or assemblages**, regulating the construction of. Sacramento, 198-a.
- Poultry**, regulating the purchase of. Sonoma Co., 204-b.
- Professions, trades and callings**, licensing and regulating. Sawtelle, 211-a.
- Paving**, prohibiting the interference with. Sacramento, 212-b.
- Rice**, relating to seed inspection and eradication of water grass in rice lands. Solano Co., 210-b.
- Smoke from smokestacks**, regulating the emission of. Taft, 190-c, 208-b.
- Streets**, establishing the areas of. Mountain View, 193-b.

Structures in or above the surface of streets, prohibiting. San Bruno, 197-b.
Streets, changing the names of. San Rafael, 201-a.

Streets, alleys, sidewalks, relating to use of for building purposes. Sacramento, 212-e.

Saloons and drinking places, regulating the increase of. Sacramento, 212-d.
Street, closing. Redondo Beach, 215-b.

Traffic on streets, relating to. Napa, 190-b.

Travel and traffic on streets, regulating. Taft, 191-b; Berkeley, 214-b.

Tractors and tractor engines, licensing and regulating. Kings Co., 199-b.

Theaters, licensing (amend.). Sisson, 201-d.

Vehicles and horses upon the streets, care of. Berkeley, 214-b.

Water, fixing the rates. Modesto, 204-e; Sawtelle, 210-e; Lakeport, 213-c.

Weeds? Why, It's Easy to Kill Them With the Atlas "A" Method

This can be Obtained by Using

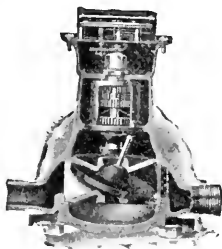
"ATLAS A. WEED KILLER" Which Destroys all Existing Vegetation—Seeds and Roots.
 No Danger from Grass Fires after Application.

Atlas Preservative Company of America, Inc.

RIALTO BUILDING

Write Us For Literature

SAN FRANCISCO, CAL.



TRIDENT DISC

**Over 128,000 Made and Sold
 in 1915**

A record unsurpassed in the history of
 the Meter Business

Manufactured by

NEPTUNE METER CO.

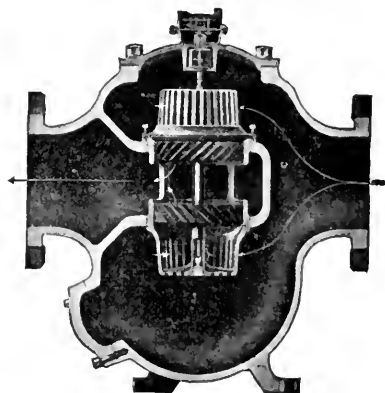
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
 SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
 No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
 C. I. Breakable Frost Bottoms for Cold Climates
 Hot Water and Oil Meters Crest Meters for Large Flows
 Compound Meters for all Streams, Large and Small



TRIDENT CREST
 SAN FRANCISCO OFFICE
 320 Market Street



CHURCH STREET, NEW HAVEN

An Attractive Business Section is a Business Asset

It is a well known fact that where there is plenty of light, there you will find activity and trade. It is the brightly lighted thoroughfares that bring the business; trade naturally follows the light.

Make your business section a busy section; bring the people down town at night; attract the trade from adjacent towns and villages; enliven the streets and give your city the appearance of prosperity.

Call the business men together and put up to them the proposition of a well-lighted city; show them how a "white way" is a real business asset and a good investment.

Install Ornamental Luminous Arc Lamps as hundreds of progressive cities are now doing.

These lamps give a beautiful, white light and the illumination though brilliant is well diffused.

The artistic poles lend themselves to a large variety of designs—making the appearance of the streets attractive by day as well as night.

Bulletin No. 4955 give details of this most modern system of street lighting. Send for your copy today.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
724 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.

6121

Mention "Pacific Municipalities" when writing for catalogs.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

Neptune Meter Co., S. F. & L. A.

National Meter Co., 681 Market St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

The American City

published at 87 Nassau Street, New York (Chicago office, 327 South La Salle St., San Francisco office at 320 Market Street,) has just published its annual

MUNICIPAL BUYERS' GUIDE FOR 1916

This guide is a book of 156 pages containing classified lists and information in regard to the products of over three hundred advertisers in THE AMERICAN CITY, representing leading manufacturers of road building and paving materials and machinery, water works supplies and equipment, street lighting, drinking fountains, trash and garbage cans, fire department apparatus and supplies, trees and shrubbery, as well as mechanical equipment for park and cemetery use, etc. Names are also included of many leading consulting engineers and landscape architects available for municipal improvement undertakings.

The price of this Buyers' Guide is 50 cents, but any official having to do with purchases of machinery or supplies may secure a copy free of charge by making request for same to our nearest office.

The American City

87 NASSAU STREET
New York City

320 MARKET STREET
San Francisco, Cal.

327 SOUTH LA SALLE ST.
Chicago, Ill.

In addition to sending the Municipal Buyers' Guide free of charge, we shall also be glad to send you a copy of THE AMERICAN CITY (in case you are not already a reader of it) together with an attractive combination subscription offer which we are making in connection with "Pacific Municipalities".

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:

Monadnock Bldg.

Northwest Office:

Northwestern Bank Bldg., Portland, Ore.

General Offices:

Burlington, N. J.

Corrugated Iron Culverts

Are conceded by most Engineers to be the last word in
Drainage Structures, as well as the most
Efficient and Satisfactory

When You Buy Corrugated Culverts BUY THE BEST

BUY



**"ARMCO" (American Ingot) IRON
CORRUGATED CULVERTS**



99.84% Pure

**"Culverts with a Reputation" Combining EFFICIENCY
ECONOMY, DURABILITY and STRENGTH**

California Corrugated Culvert Company

LOS ANGELES
411 Leroy St.

WEST BERKELEY
400 Parker St.

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes



Showing the versatility of the

**Empire
Compound
Meter**

Accuracy alike on large and
small streams.

Increase your revenue. Get
paid for all the water.



National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO
THE MUNICIPAL LEAGUE OF MONTANA
—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Dayton's Form of Government.....	139
The Proposed New Charter for Los Angeles.....	141
The City Manager Plan.....Lyman M. King	144
City Management Plan Is Outlined.....Sacramento "Bee"	150
Richmond's Milk Ordinance.....	151
Specialized Street Lighting Advice Available.....	152
Municipal Tree Planting and Lot Cleaning.....	153
What Our Pacific Coast Cities Are Doing.....	157
Titles of New Ordinances Received.....	159

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal

Two Dollars a Year
Single Copy 25 Cents

NEW FORMS

To comply with 1915 Amendments to 1911 Act

An Entire Change of Forms and Records under this Act

If you are operating under the 1911 Act and Amendments, you will need the new forms as there have been many important changes.

WE CAN SUPPLY THE CORRECT BLANKS

You will need new sheets for your Street Superintendent's record, as all forms have been changed.

Our Publication the "Improvement Act of 1911" is being revised by W. J. Locke and will be ready for delivery shortly. This booklet will contain very valuable information and you will find it indispensable.

A. CARLISLE & CO.

SPECIALISTS IN MUNICIPAL SUPPLIES

251-259 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

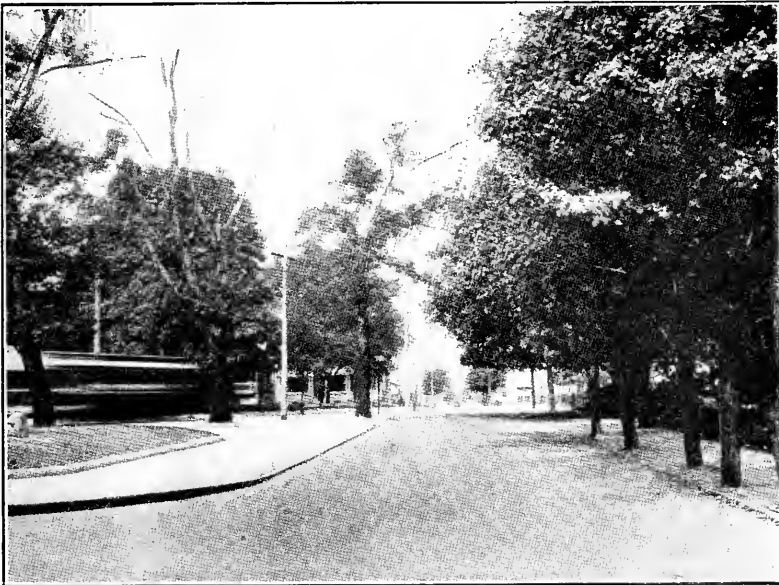
Investment versus Speculation

BITULITHIC

Is an asset. It is an investment—Not a speculation

Investigate **BITULITHIC** before determining to use inferior street paving. It is cheaper to have a good pavement in the beginning than to contract for cheap constructions which have to be repaired every year.

There is no guess-work in the construction of **BITULITHIC** Pavement. It is made of varying sizes of the best stone obtainable combined with bituminous cement and laid under close laboratory supervision. You must realize that quality is remembered long after the price is forgotten. The character of a city is indicated by the condition of its streets.



WILMINGTON, DELAWARE

Eleventh Street, looking West from intersection at Washington Street. Bitulithic Pavement laid over old asphalt block in 1910. Photograph taken September 15, 1915

Over 450 cities have adopted **BITULITHIC** as a standard pavement for their streets in the United States and Canada from the Atlantic to the Pacific Coast and from Edmonton, Alberta, on the north to El Paso, Texas, on the south. Thus showing that **BITULITHIC** will stand the varying climatic conditions.

BITULITHIC stands for quality—Quality should always be first consideration when specifying street pavement surfaces.

BITULITHIC once—**BITULITHIC** always.

Specify **BITULITHIC**
for your streets to be paved this year.

Write for illustrated booklets.

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
Portland, Ore.
Los Angeles, Cal.
Winnipeg, Man.

Chicago, Ill.
Utica, N. Y.
Richmond, Va.
Vancouver, B. C.

Rochester, N. Y.
Phoenix, Ariz.
Toronto, Ont.

Nashville, Tenn.
St. Louis, Mo.
Montreal, P. Q.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA M U N I C I P A L I T I E S

ORGANIZED 1897

— OFFICERS —

President	-	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-			(City Attorney of Napa)	-		WALLACE RUTHERFORD
Second Vice-President	-	-			(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON			Executive Secretary	-		WM. J. LOCKE

Secretary's Office and Headquarters of the League. - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calxico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX EIGHTEENTH YEAR No. 4

EDITORS - - - H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA
JOHN H. RUSSELL, PH. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON
N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

APRIL, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine
for each of its officials without extra charge. If not received kindly notify the Secretary.

Dayton's Form of Government

Declares Its Success Is Largely Due to the Support It Receives From Citizens

Complying with a request made by Secretary C. G. Morrison, Gen. H. M. Chittenden, former port commissioner of this city, made a close investigation of the commission-manager form of government in force in Dayton, Ohio, during his recent visit to that city. He had an interview with Manager Waite and talked with several business men, endeavoring particularly to discover the weak points of the system and features which might prove to be elements of weakness in situations unlike those in Dayton.

Gen. Chittenden's report of his investigation follows:

"Dayton's present city charter was adopted by a vote of the people August 12, 1913, and went into practical operation on January 1, 1914. While the great disaster of the flood of March, 1913, may have increased the majority by which the charter was adopted, the

decision to try the experiment was practically made before the occurrence of that event. In briefest summary the following outline abstracted from the statement of the charter commission in submitting the charter to the people describes the system of government.

FIVE COMMISSIONERS.

"Legislative functions are delegated to a commission of five citizens elected at large for a term of four years.

"The commission selects a competent, trained and capable person to manage the affairs of the city.

"Party politics are absolutely eliminated.

"Ward lines are abolished.

"The short ballot principle has been adopted.

"Elective officers and the manager are subject to the recall at all times.

"The people may initiate legislation and compel the submission to them of

any legislation passed or refused to be passed by the commission.

"A civil service board of three is appointed by the commission for a term of six years.

"The various functions of the government are subdivided into departments, each of which is under the charge of a director selected by and under the direction of the manager.

"All of the financial affairs of the city are consolidated in the department of finance. Principles of accounting are laid down and the duty imposed on the director of finance to establish them for all administrative departments. An independent continuous audit by certified public accountants, under the direction of the commission, is also provided, as well as complete compulsory publicity of all financial affairs.

PUBLIC WELFARE.

"Public health, parks and playgrounds, charities and corrections and recreations are gathered together in the department of public welfare.

"All purchases made by the city are made by an agent appointed for that purpose, who shall purchase supplies after competitive bidding.

"The charter provides:

"A simplified election system.

"Elective officials are directly responsible to the people.

"Responsibility is definitely fixed.

"An adequate system of accounting is established.

"The rights of the city in matters relating to franchises and utilities are carefully guarded.

"The merit system in appointment to public offices is assured.

"Full publicity of public records is provided.

"The manner of assessments for improvements has been clearly set forth.

"The commission is given authority to settle damage claims without unnecessary cost.

"An eight-hour law for public work may be provided.

"Improvements may be made by contract or by direct labor.

"In practical operation the system works thus:

"The people elect a non-partisan commission. (The member receiving the highest vote becomes manager, at a salary of \$1,800; the other commissioners receive \$1,200.) The commission selects a city manager who may or may not be a resident of Dayton. The present manager, H. M. Waite, was not, at the time of his selection, a resident. His salary is \$12,000. The manager appoints five directors who control the five departments into which the city affairs are divided—law, finance, service, safety, welfare. In these departments, likewise, the manager may go outside the city, if he cannot find the right talent within; but naturally Daytonians are entitled to first choice, other things being equal.

"The fundamental principle of the whole scheme is to treat the city as a business organization and to conduct its affairs on strictly business principles. The commission is virtually a director, etc., to determine questions of policy. Having done that, the executive functions are turned over entirely to the city manager. Mr. Waite told me that he knew absolutely nothing of the politics of the commissioners or any of his force except as such knowledge may have come to him incidentally. His sole aim is to secure efficient service, regardless of political affiliations.

"I found an almost unqualified approval of the system as it works in Dayton. I was not able to develop any criticisms worthy of consideration. As it has worked for the past 22 months it must be pronounced a success. Two features in particular which are unwelcome to the average politician have much to do with this success.

"(1) The commissioners are not heads of departments, as in some forms of commission government. They are a legislative body only. There is therefore no rivalry among them and nothing to disturb unity of action in determining questions of policy. All executive functions are turned over to the manager.

"(2) The taking away from the electorate of the direct choice of purely technical help is an enormous gain. For example, a city engineer can better be chosen by a manager who will look only

to his qualifications, than by a vote of the people who cannot if they would, investigate and determine these qualifications. The whole system, in fact, is the nearest approach within my knowledge to the administrative system prevailing in the best governed European cities.

"Now, why may not such a system prove equally successful in Seattle? My whole doubt lies in the difference in public view point in the two towns. Dayton's leading citizens have not stopped with provision of a good form of government; they have taken it upon themselves to see that it shall work. More than in any other community that I know of, a few public-spirited men of wealth give freely of their time and means to the upbuilding of the city. Voluntary organizations are formed—one of the most important is called, I believe, the Citizens' Committee—who take it upon themselves to see that responsible business men are induced to accept the post of commissioner. They virtually make up a slate and they make it a business to see that the men selected will take the office. Often this requires the most strenuous persuasion, not only with the individual himself, but with his family, for office holding in America has drawbacks

that drive away the best representatives of our citizenship. So far this personal work has had admirable results, for it goes to the very fountain head of authority and lays its foundation right there.

CIVIC SPIRIT NEEDED.

"But I doubt if a similar result would follow in Seattle. The very fact that a few of our wealthy citizens might give their money and time to put up a set of men who they believed would work for the best interests of the city, would be a sufficient reason with a majority of the electorate to vote against them. It is an unfortunate situation for which no effective remedy is apparent. If the system must be turned over absolutely to the tender mercies of political workers, its success will be far from certain. Perhaps the influence of a non-partisan body like the Municipal League might fill the role of the voluntary organizations in Dayton, though not by any means in the liberal contribution of funds. But in some form or other a high civic spirit on the part of the people must make itself felt, or the system would prove at least only a partial success."—*Seattle Municipal News*.

The Proposed New Charter For Los Angeles

Statement of The Board of Freeholders

To the City Council and Voters of the City of Los Angeles:

This Board of Freeholders was elected in recognition of the fact that the charter under which the city has been operating for the past twenty-five years, during which time Los Angeles has increased from a city of 50,000 to one of more than 500,000, has been outgrown, the numerous charter amendments having destroyed all semblance of unity.

In the preparation of the new charter, the Board has sought information and suggestions from every source, public hearings have been held, present and former city officials have been invited to give the Board the benefit of their experience, the opinions of men from other

cities experienced in municipal affairs have been solicited, and the charters of other cities have been carefully examined and studied. The Board has accepted what it deemed to be the best suggestions from these various sources and incorporated them in the charter; it has sought to retain those provisions of our present form of government which have, from experience, demonstrated their value and peculiar adaptation to the requirements of this city, and many of which have been recently sanctioned by the voters.

The Board of Freeholders has attempted in the proposed charter to establish for the administration of the business of the city a fundamental frame-

work of systematic business organization in place of the disjointed and disorganized arrangement now prevailing; it has attempted to answer in the affirmative the question, can the city be administered as an efficient business organization? The following provisions have been directed to this end:

Those departments which are essentially of a business nature in the subjects with which they deal: Finance, Public Works, Public Safety, Public Service, Public Utilities and Harbor are each put under a single director, appointed by the Mayor and confirmed by the Council. In taking this step, the Board followed the almost universal practice of the large cities of the United States.

Those departments which in contrast to the business departments are largely humanitarian: Public Welfare, Recreation, Library, Parks, Civil Service and Municipal Art are each placed under a commission of five citizens, serving without compensation.

The various functions of the government scattered in the present charter into forty independent branches have been unified in the proposed charter into twelve departments. Furthermore, uniform provisions regarding the administration of each of the departments have been adopted which will do away with much of the confusion now existing. The popular demand for a reduction in the number of commissions has been met by eliminating ten commissions.

The number of the members of the Council has been retained at nine, but their term of office has been changed from two to four years, five members being elected each two years, the four highest to a four year term and the fifth to a two year term. The purpose of this provision is to enable the voter to elect a majority of the Council each two years.

The term of the Mayor and the other elective officers has been set at four years.

A City Controller has been created in place of the present City Auditor and has been given increased powers of checking the expenditures of public

moneys, so that as a direct representative of the people he may prevent any improper waste or expenditure.

A Municipal Court, consolidating the functions of the present Police Courts and Township Justice Courts, has been established with a total number of judges equal to the total in the present courts. This court will divide its work into various departments in the manner of the Superior Court, each department handling a particular class of cases so that first offenders, delinquency cases, or cases arising in a particular district may be handled in separate departments. The fees from this court will bring in a large revenue to the city now going to the county.

Many improvements have been made in the financial provisions of the charter. The fiscal year has been changed from July 1 to October 1, saving the city the difficulty of maintaining a reserve fund of about \$1,200,000 to bridge over the period between the beginning of the fiscal year and the payment of the taxes. A Committee of Estimates, consisting of the Mayor, Controller and President of the Council, has been provided, which will have charge of the preparation of the budget estimates in place of the Finance Committee of the Council. The City Council will, however, as at present, finally pass the budget appropriations which must also be approved by the Mayor. A central purchasing division will make the purchases of all the city departments, thereby making possible a great saving.

The existing charter is so phrased that special city elections cannot be consolidated with any State or County election. By eliminating this difficulty, the proposed charter will in the future save the city the expense of many special elections. It has been provided that no special election can be called upon an initiative petition, unless the petition states that it requests such special election, a requirement not in the present charter.

The Board has carefully eliminated every obstacle to the consolidation of the city offices with those of the county, providing, however, that, except in connection with the assessment and collec-

tion of taxes, this consolidation can only be made upon a vote of the people. It will be possible for city officers also to co-operate with the officers of the County, State or other municipalities in the performance of their duties.

The city is given the power to do assessment improvement work by the direct employment of labor under conditions which reserve the right of protest to the property owners in the assessment district, in the event of contractor's bid being excessive. Further, the city may create a revolving fund by the issuance of investment bonds by the use of which the local assessment work can be financed and the expenses of public improvement to property owners greatly reduced. A provision also makes it possible to make payments of assessments at the City Hall, instead of at the contractor's office.

Having in mind the development of the Los Angeles Harbor into one of the greatest harbors in the United States, the maximum term of leases of tide lands at the harbor not needed for commerce or navigation has been raised from thirty to fifty years; the harbor franchise limit for wharves has been kept at thirty years as at present and a berthing permit limit of fifteen years has been set. In general, the harbor provisions have been much simplified and placed in business-like form, and it is believed that the change made will stimulate the development of the harbor, both as a shipping point and as a location for industrial plants.

Officers and employees of the city are protected by complete Civil Service regulations.

The following salaries have been fixed: The Mayor, \$7,500; Controller, \$5,000; City Attorney, \$5,000; City Prosecutor, \$4,000; Member of the Council, \$3,000. These amounts represent moderate increases in conformity to the increased size of the city and the practice elsewhere. Two positions on the Harbor Board, now drawing salaries of \$3,000 each, have been abolished, and also two positions on the Board of Public Works, now drawing \$3,600 each.

An economical workable borough government has been made possible for out-

lying portions of the city if they desire.

Being constructed upon a systematic framework, the proposed charter can be amended, as the city's needs require, with much greater consistency than the existing charter, a feature which will commend itself to all.

On four questions which have been much argued the Board has thought it desirable to leave the decision in the hands of the electors of the city, and therefore four alternative propositions are submitted, each of which will be voted on separately from the charter.

Number one makes possible the creation of the position of Business Manager of Departments upon ordinance approved by vote of the people.

Number two provides a two year term for all elective officials in place of a four year term.

Number three provides for district representation in the City Council.

Number four provides for the election of the Council by proportional representation.

These four propositions are not amendments to the present charter, but are alternatives to the corresponding provisions of the proposed charter, and do not carry unless the charter itself is adopted. On these alternatives, the voters of the city have the right of expressing their preferences, independent of their vote on the main body of the charter.

A diagram has been included showing in graphic form the proposed governmental organization.

The foregoing is necessarily a brief outline of the more important features of the new charter. The Board earnestly requests a careful study of the whole document, knowing that many other excellent features will be found upon such examination. As a whole, the new charter is about one-fourth shorter than the existing charter.

If the proposed charter is better than the present charter, even though each individual voter may find some provisions not entirely to his liking, we believe that the voter should support the charter now proposed.

SEWARD C. SIMONS, *Secretary.*

HARRY ANDREWS, *President.*

"THE CITY MANAGER PLAN"

Paper Read Before Fortnightly Club, Redlands, Cal.

By LYMAN M. KING

The following is a copy of the paper which Lyman M. King read recently before the Fortnightly Club, his subject being the "Commission and City Manager Forms of Municipal Government."

I desire, in my brief exposition of this somewhat complex subject, to direct your attention to what is generally known as the commission form of municipal government; second, to the city manager plan as separate and apart from the commission plan, and, third, to the interworking of the two.

It can generally be set down as approved by those who study municipal government that the present acceptance of these two plans is in favor of the commission plan, with, perhaps, a city manager as the active executive and working member of the directorate, for cities of 30,000 population or more; and in favor of the city manager, without the commission, for municipalities of more than 10,000 and less than 30,000 population. The question, therefore, has some local interest because of the application of the city manager plan to our own municipal government, and because of the fact that as an incorporated city Redlands is already working under a modification of the city manager plan, while at the same time using the general laws of a city of the sixth class in California for her general guidance. That this municipality is able to make use of a modified city manager plan under the general laws of the State, and especially under those of a city of the sixth class, which class is supposed to apply to municipalities of not more than 3,000 population, is due to the fact that greatly maligned legislature of California, in response to demands emanating from our own community, so amended the laws regulating sixth class cities that they are very elastic, capable of being stretched over almost anything in the

way of government that a village like our own may wish to use.

We take our government of all kinds very seriously in California, and none more so than our municipal control. This city has twice within my own period of residence attempted to expand her governmental plans by using a charter prepared by fifteen freeholders and supposed to be, therefore, of special fitness, because of the local problems met and therein presumably settled. But there are always honest differences of opinion as to the wisdom of the ideas of the freeholders, and in Redlands on both occasions there were more who differed than approved. In consequence, we are still running along under our little old sixth class city provisions, planned for a village of not over 3,000 people, which, for some reason or other, desires to do business as an incorporated city. And the longer we use our swaddling clothes, the better we seem to like them. I see no great demand for a freeholders' charter at this time nor even that we step up into the fifth or the fourth class, where the forms of government are planned for municipalities of our size. But, as I said before, the sixth class laws have been made so elastic that with the adoption of a modified city manager plan we really get along very nicely.

The trouble with a freeholders' charter, as a general thing, is that the fifteen local men who frame it, with the best intentions in the world, generally make it too long and cumbersome. They attempt to place in the organic law of the community so many things that should be the subject of legislation by ordinance only because of the need of amending them occasionally, as the ideas of the people may change, or as the development of the city may demand. Such a charter is often from four to six times as long as it should be, and con-

tains drastic provisions upon all sorts of questions, many of them of trifling moment as far as organic law is concerned, though doubtless seeming of the utmost import to those who framed the instrument. And this very redundancy of text and subject is the reason in most cases why so few freeholder charters are adopted by the people. The freeholders themselves divide upon questions and insert provisions which are agreed to oftentimes by only a bare majority of their own number. How can they expect such provisions to get by the people without opposition? And with a number of such debated questions handled, even wisely, in the charter, the discussion when the instrument is submitted to the people develops one faction opposing one section of the charter, another faction in opposition to another, and so on, until nearly all the voters are denouncing from one to four provisions. When the vote is taken it is found that the charter is overwhelmingly defeated, because each element that was dissatisfied with any one provision voted against it. That is a common history with freeholders' charters. They contain much that is good, many excellent local features, but, like the man who talks too much, fail to convince.

Galveston, Texas, was the first American city to make a conspicuous success of the commission form of municipal government, which may be very briefly outlined as a plan of handling city business by giving to each elected councilman control of one department of municipal activity. For instance, one commissioner will have charge of the streets, another of the police department, and so on. Pasadena offers the clearest example of this form of government in Southern California, where there are but three commissioners each with much power in his own department of work. Dayton, Ohio, is, however, the most advertised city with the commission plan of government today, but has combined with it, very happily up to the present, a city manager.

Eighty-one out of 204 cities throughout the country of over 30,000 inhabitants have the commission form of gov-

ernment, according to figures given out by the Department of Census, which is preparing to issue a book on municipal statistics.

These cities are scattered throughout twenty-six states, ranging from Massachusetts to Washington and from South Carolina to California. Five are in New England, twenty-seven are in other northern states east of the Mississippi, sixteen in northern states between the Mississippi and the Pacific Coast States, nine in the Pacific Coast States, and twenty-four in the South.

New Orleans, with a population of 365,000, is the largest city now operating under this advanced form of municipal government; but Buffalo, having a population of 460,000, will inaugurate the system soon. Next in order are Washington, D. C., with nearly 350,000 inhabitants; Portland, with about 260,000, and Denver, with about 250,000. The commissions range in size from three to seven members. Those in St. Paul and Omaha have seven members each; those in San Diego and Fort Worth, six each, and that of Huntington, West Virginia, four. Stockton, Cal., has four commissioners and a mayor.

Dayton, which has done much to popularize the commission form of city government, has an organization of five commissioners and a "city manager." The commissioners decide matters of general policy and the "city manager" looks after the administrative. The presiding officer receives \$1,800 per annum, the other members \$1,200, and the "city manager" \$12,500. Thus it can readily be seen that the bulk of the work in Dayton falls on the "city manager," who receives a salary commensurate with the scope of his duties.

The bureau's report will show that the larger cities still cling to the older form of government by mayor and council. In all, 123 cities of over 30,000, including all having more than 40,000 inhabitants, are governed in this manner. The mayors' salaries range from \$100 a year in Flint, Michigan, to \$15,000 in New York City, and their terms of office from one to four years.

Interesting figures are given concern-

ing police departments. A total of 51,045 police officials, patrolmen, detectives and civilian employes are engaged in the work of maintaining peace and order in the 204 cities. Of this large total, 5,586 are officers exclusive of detectives, 3,303 are detectives and 34,320 are patrolmen. Of the patrolmen, 31,294 are unmounted and 1,804 are mounted on horses, 708 on motoreycles and 514 on bicycles. New York, of course, heads the list as to number, having 526 mounted policemen. San Francisco pays its policemen more than any other city in the country, each ungraded patrolman receiving \$1,464 a year. The lowest paid are in Williamsport, Pa., which pays its policemen only \$756 per annum.

The one reason for the commission, city manager, or any other enlightened form of government is, of course, to secure more efficiency and more economy. Prof. West of the department of political science at Stanford University says that Dayton also added to those two things sought, better control of their officers. The principles underlying the Dayton charter, which, you will remember, calls for a city manager as well as for the several commissioners, are, therefore, two, namely, that popular control can be secured by reducing the number of elective officers, and efficiency can be secured by concentrating authority and responsibility for administration in the hands of one trained administrator, just as a business corporation would.

Later on in his paper Prof. West says that entire control and supervision of the city administration is vested by the charter in the city manager, who appoints all city officers, directs and controls the various departments and divisions of the city government, and in general is required to see that all the laws and ordinances are enforced. In the appointment and removal of department and division heads the city manager is given free rein, except those included in the civil service. The third main point is that it is the intention of the charter that one trained, capable executive, not elected but appointed, shall be held entirely responsible for the actual administration of city affairs within the

limits set by the order of the commission or trustees.

Perhaps the best test of the commission form of government, which has now been in operation in the country practically since the time of the Galveston flood, is that though some 300 cities have adopted it, none has discarded it. That it is successful, however, is not saying it has no defects, though these are generally conceded to be local in their character and of necessity must be cured locally. Indeed, the city manager plan is a recent innovation, devised to cure a defect in the commission plan—the fact that there was need for one executive head for a greater centralization of power, for final action, and to properly harmonize and bind together the activities of the respective commissioners.

The first argument one hears is that private corporations are generally managed with greater economy and efficiency than public. And the first move, naturally, is to build the control of the public corporation more like that of the private. The analogy is not complete, however, for the conspicuously successful private corporations are those which have highly trained men to perform the duties of directors and managers. We have in a democracy an inherent opposition to choosing outside men, just because they may be efficient, to hold our public offices, be these offices municipal or state. Some foreign countries make the management of a municipality a profession, but I am afraid we will be very slow in coming to that here in the United States, though a few cities may do it. But even in the hands of inexperienced men, that is, men inexperienced in government, though experienced in their respective departments, the commission plan is infinitely superior to the old-time charter with its ward politics.

The principal defect in the plan, in my judgment, lies in the fact that we choose our municipal officers poorly. Nominations are not made because of the peculiar ability the nominees may have for the work ahead of them. To be sure, it is not often that conspicuously poor men are named, but where the salary is

sufficient to attract, or the power, there is a scramble for office. The men chosen may be good enough business men in the abstract, but nine times out of ten they know nothing in detail of the work they are to take up. And the wonder is that we get as much efficiency as we do. The commission plan pre-supposes technical ability in candidates; it offers no suitable salary, and leaves selection to popular prejudice. The greatest defect in the plan is that it leaves to the electorate the choice of an administrative official—remember, I am at this instant discussing the commission plan only, and in the larger cities. I think it is conceded everywhere by students of government that it is impossible for the electorate to judge the fitness of a candidate for an administrative office.

Another defect becoming apparent as time goes on is the lack of criticism among the departments. One commissioner does not feel free to criticise the acts of other departments, and lay his own open to criticism in return. Jealousy between commissioners and manager ends it. The commission form of government has not given us real efficiency, therefore, that is, the commission form alone. It has eliminated ward politics, graft and partisan politics in municipal affairs, and it is better than the old forms, but it is not the best obtainable. There are degrees of everything, and we have not yet attained the degree of ultimate satisfaction.

But we have taken one step nearer it. I believe, although the plan is yet few of years. This step is the city manager. The city of Dayton, Ohio, is the best instance of the commission plan, improved by the city manager plan, and it is worthy of note that both these improvements in municipal government came about following a crisis created by a great flood.

I venture to describe the Dayton plan with more attention to detail than has been given to the other developments in city management merely mentioned, because it seems to be so much of a success, and I would repeat that the governmental needs at Dayton were two, as sought to be supplied by this present

plan, and I again quote at this point from Prof. West of Stanford. They are: (1) Better control of their officers, and (2) greater efficiency in the administration of city affairs. The principles underlying the charter are also two: (1) Popular control can be secured by reducing the number of elective officers, and (2) efficiency can be secured by concentrating authority and responsibility for administration in the hands of one trained administrator, just as a business corporation would. The amazing simplicity of the Dayton system is, therefore, due to its absolutely scientific character. First, all the needs of the city as a governmental agency were reduced to two, and then to these were applied two of the soundest principles of political science.

The powers of the city of Dayton embrace all governmental activities appropriate to a municipality, except management of schools and libraries. These powers are exercised by a commission of five members elected at large for a four-year term. Elections are held every two years and only a part of the commission retires each biennial period. Elections are non-partisan. After serving six months the members of the commission are subject to removal under recall proceedings, in response to a petition signed by 25 per cent of the voters.

A petition of the same number of voters may require any ordinance (except emergency measures) to be repealed by the commission or submitted to the voters for their action. Likewise 10 per cent of the voters may submit to the commission a proposal for an ordinance which, if rejected, must be referred to a popular vote if an additional 15 per cent of the voters so demand. The first point to be noted, then, is that the people of Dayton are in continuous and complete control over their commission.

The member of the commission receiving the highest vote in the election at which three are chosen becomes mayor for the next four years. His duties are almost nominal; he presides at the meetings of the commission and represents the city for legal and ceremonial pur-

poses. In recognition of his slightly greater responsibility he is paid \$1,800 per year, while the other members receive \$1,200. In addition to the usual powers of such bodies, *i. e.*, ordinance, financial, etc., the commission in Dayton has important appointive powers, but no other administrative powers. It appoints its own clerk, who serves also as city clerk; it appoints a civil service board of three (one each two years for a term of six), it appoints from time to time certain advisory boards, and finally and most important, it appoints and may remove the city manager, who, as head of the city administration, is the center and keystone of the whole system. In the appointment of the manager the commission is subject to no legal limitation as to residence or salary; he may come from anywhere in the United States, and they may pay him whatever seems necessary and proper. The city manager is subject to the recall under the same procedure as for commissioners. The second point to be noted is that it is the obvious intention of the charter that the commission should be responsible for the city manager, with a reserve power in the people in case quick action were necessary.

Entire control and supervision of the city administration is vested by the charter in the city manager, who appoints all city officers, directs and controls the various departments and divisions of the city government, and in general is required to see that the laws and ordinances are enforced. In the appointment and removal of department and division heads the city manager is given free rein; but in appointing to the "classified service" (which includes all city employees except those just mentioned and their deputies and secretaries) the manager is obliged to consult the chief examiner of the civil service board and to select the appointee from the eligible list for the position to be filled. Likewise removal from the classified service or reduction in rank can only be accomplished after the employee has been given a chance to defend himself from specific charges made in writing before the civil service board.

The third main point is that it is the intention of the charter that one trained, capable executive, not elected but appointed, shall be held entirely responsible for the actual administration of city affairs within the limits imposed by the commission's orders, except that he is to be assisted in his appointments by a civil service board, and may not discharge employees arbitrarily.

The charter now proceeds to organize the city administration in five departments: (1) Law, under the city attorney, who is both prosecuting attorney and legal advisor; (2) finance, under a director, in three divisions, accounting, treasury and purchasing; (3) public safety, under a director, divided into the divisions of police, fire, weights and measures, and building inspection; (4) public service, also under a director, subdivided as follows: (a) The division of engineering, with bureaus of design and construction, sewer maintenance, and street lighting; (b) the division of streets with bureaus of garbage removal, street cleaning, street repair, etc.; (c) the division of water, in three bureaus, and (d) division of public lands and buildings, in two bureaus; (5) public welfare, also under a director, including the divisions of legal aid, correction, parks and playgrounds, recreation, health and the state-city employment agency.

The charter provides in great detail for financial procedure. The annual budget is to be drawn with the utmost care and passed only after adequate publicity.

The first year has shown a considerable saving in money, and a government much more satisfactory to the people.

Generally speaking, every American knows that the only way to run a bank or a railroad or a pickle factory or a chain store system is to elect a board of directors and let them choose a manager for the corporation. He knows that this manager must be a man of absolute integrity and great ability, that the fortunes of the concern depend largely upon him, and that he must be paid a large salary.

The people who have adopted the city

manager plan of government have simply awakened to the fact that a city is also a corporation in which each citizen is interested, and that it requires the same expert direction as all other corporations. They realized that the old method was fundamentally wrong. If you own stock in a railroad, it would cause you some alarm to see things placed in the hands of a committee of ten elected from among the stockholders on the strength of their promises of dividends, and absolutely without regard to their knowledge of railroading. Yet that is the way most American cities are run. The commission plan of government makes one improvement by electing three or five men instead of nine or ten, and fixing a share of the responsibility upon each of them. The city manager plan carries the analogy between the municipal corporation and the business corporation to its logical conclusion by electing a commission which acts merely as a board of directors and chooses a single high salaried manager to run the city just as a bank president runs a bank.

By this plan the commission meets perhaps once a week to discuss the city's business with the manager. Thus the commissioners do no detail work and their positions do not interfere with their private business. This makes it possible for the highest type of business man to be a director in the city government without neglecting his own affairs. Likewise, the purely nominal salary paid makes the office of commissioner unattractive to the professional politician.

Harking back once again to a city of approximately the same size as the one in which we live, Bakersfield, Kern County, has made an excellent showing under a city manager, and that, too, despite the fact that it chose the managing editor of one of its papers to be the first city manager. Probably the commissioners figured they might as well begin at the bottom of the ladder; that if they could make a business success with a newspaper editor in command they could do very much better when they should secure an incumbent

for the place more approaching the ideal. I quote from an editorial in another Bakersfield paper, following upon the filing of the annual report of the city manager, the editorial entitled "Making Good:—"

The city manager plan is giving larger service at reduced cost, efficiency is consequently greater and the taxpayers are getting full value for every dollar paid in. The manager's report showed that for the first six months of the charter, expenditures amounted to \$85,887, which was \$9,667 less than for the first six months of the preceding year under the old board.

The city now cares for the public charities which used to be cared for by public subscription by a comparatively small number of citizens. Now all help pay the charity bill which this year will be some \$4,000 or \$5,000. The school nurse, paid by the city, is raising the standard of health in the schools and in the homes of pupils. Labor under the present system gets \$3 a day for eight hours, which is 20 per cent more than they received a year ago. And about \$10,000 was spent out of the current expense allowance during the past six months for permanent equipment and betterment.

The street, health and police departments are doing real service. The appropriation for the street sewer, repair and engineering departments was less by \$12,000 than the sum spent by these departments last year and \$5,000 less than was expended for the same departments in the year 1913. All this was accomplished despite a wage increase of 50 cents a day to many laborers.

Overhead expense is found to be less under the people's charter. The cost of the council, clerk, manager, auditor, treasurer, attorney and assessor is running less this year than last and in all departments economies in service and saving in purchase of supplies have been effected, thereby increasing the service. These economies and savings more than offset wage increases and extensions of the public service.

The new government in six months' time managed to produce permanent re-

sults in better streets and obtained higher efficiency in the general administration of the city's affairs. So much is this evident that under the present manager accounting system the public can keep a line on municipal expenses and progress from day to day. It is not a hit and miss system; it is a concrete form of city rule which gives practical results for every dollar paid in and leaves the commonwealth with a good showing on the right side.

In the tentative draft of what should constitute a model small city charter the National Municipal League has given this outline: The city manager shall be the chief executive of the city. He shall be chosen by the council solely on the basis of his executive and administrative qualifications. The choice shall not be limited to residents of the city or state. He shall be removable by the council. The city manager shall be responsible to the council for the proper administration of affairs of the city and to that end shall make all appointments.

The city manager shall prepare and submit the annual budget on the basis of estimates made by the directors of departments.

In the American City, bound volume, in our own library, for 1915, page 507, are reports from the cities operating under this plan, and the full duties of a city manager are given.

In the Independent of recent issue is an article on "City Managing a New Profession." In it I find that the manager at Abilene, Kansas, says the system there is hailed as the one most fully embodying honesty, system, fairness, harmony, expertness, abolition of rotten politics and consideration of every employee.

The Literary Digest of July, 1915, has an article showing figures of actual operation of the plan.

Colliers of October 16, 1915, tells in a fully illustrated article the story of Dayton and how the plan is making good there. I commend all of these to those who would study the scheme.

City Management Plan is Outlined

Political Scientist Reed Shows Weak Points in Sacramento's City Government

(Sacramento Bee.)

The City Manager form of government for municipalities is the most advanced, economic and efficient form of government at present known to political scientists, today declared Thomas H. Reed, head of the Political Science Department of the University of California, at the luncheon at the Travelers Hotel of the Civic League.

Reed formerly lived in Sacramento and was here when the present charter was drawn up. He declared the present Commission form of government was far superior to the old form of government, but still there is much lacking to make the local government entirely efficient.

HOPE FOR SACRAMENTO.

"I have hope for Sacramento, however," declared Reed, "for Sacramento is as bad as it ever has been, and knows

it. Therefore, Sacramento may become as good as it would like to be. Berkeley, on the other hand, thinks it is chemically pure and perfect. There's not so much hope for Berkeley."

Reed declared in favor of a City Manager form of government. He said this easily could be accomplished here by a simple amendment to the Charter. The five Commissioners could have their salaries taken away and paid, perhaps, \$10, for each meeting they attended.

Under the city manager plan, declared Reed, the City Manager would be directly responsible to the Commissioners who elected him and he would have to make good or not survive. Reed likened a city to a big corporation and explained how all successful corporations elected a president or a manager to conduct the business for them, while they watched everything he did.

DIRECT ACTION NOT GIVEN.

While the Commission form of government has given Sacramento a shorter ballot, a smaller council and other benefits, still it does not, said Reed, accomplish the main purpose, that of giving The People more direct action.

"Each Commissioner runs his own department," said Reed. "He is like the legislators who honor our State by coming to this city ever so often and consenting to make laws. Each has his pet measure and his hobby. He wants to put his pet measure through.

"As the Commissioners, like legislators, live in glass houses, one Commissioner doesn't dare interfere with the wishes of another Commissioner for fear there will be a stone throwing that will make too big a crash. There is inefficiency in this form of government.

CONSOLIDATION URGED.

"But before Sacramento can hope to reach real economy in government first it must consolidate the city and county governments. Who ever heard of a successful corporation having two sets of directors, two sets of floor walkers, or bookkeepers, each to go over the steps of the others?

RECALL DISCUSSED.

"You say the Commissioners are subject to recall and they must reflect the will of The People. You have the right of recall, all right, but you can't recall an official unless he has done something that you could convict him of in the Superior Court. When you elect an all-powerful Mayor you are practically at his mercy until his term is up.

"Wherever the Manager form of government has been tried it has proved successful."

REMOVAL NOTICE.

The United States Cast Iron Pipe & Foundry Company announces the removal of its Southern Sales and Traffic Offices from Chattanooga, Tennessee, to 1002 American Trust and Savings Bank Building, Birmingham, Alabama. This change becomes effective April 1, 1916.

RICHMOND'S MILK ORDINANCE.

Dear Mr. Locke:

I notice on page 120 of the March number of Pacific Municipalities a letter from Dr. Charles R. Blake, Commissioner of Health, Richmond, California, and an outline of Richmond's new milk ordinance. There are one or two points in Dr. Blake's letter which call for comment, as they may mislead others.

In the first place he states, "We have left out everything regarding bacteriological counts, as that is taken care of by the State law that goes into effect next October." In regard to this statement, it should be borne in mind that the bacteriological and other standards prescribed in the new law are distinctly stated to be minimum requirements. It is within the province of any city to set whatever standards it may desire, provided the minimum provisions of the State law are not reduced. This permits some flexibility, to enable the various cities to adopt standards suited to their local conditions.

Dr. Blake also states that while the State law exempts milk of tuberculin-tested cows from being pasteurized, nevertheless the Richmond ordinance requires pasteurization of all milk on the assumption that typhoid fever and other diseases can be transmitted as well by the milk of tuberculin-tested cows as by the milk of cows not tuberculin-tested. While Dr. Blake's contention is perfectly correct, it does not seem to the writer that it would be advisable to require all milk to be pasteurized, for a number of reasons which it is unnecessary to detail here. A fully adequate dairy inspection service will be able to handle any possible outbreak without the necessity of pasteurization of all the milk. It is also doubtful whether a compulsory pasteurization ordinance would be advisable in very small towns, for the reason that, unless properly supervised, pasteurization gives a sense of security without actual safety.

It is interesting to note that in Palo Alto, where pasteurized milk has had to come into competition with a well-supervised supply of exceptionally high-grade

raw milk from tuberculin-tested cows, the pasteurized milk has been a commercial failure.

Respectfully yours,
HAROLD F. GRAY,
Health Officer.

SPECIALIZED STREET LIGHTING ADVICE AVAILABLE.

Coincident with the increased interest in municipal street lighting, the General Electric Company has organized its street lighting department for the purpose of giving engineering advice on street lighting problems. This company, with its corps of street lighting specialists, is the pioneer in correct street lighting practice and has carried the

bulk of the burden in the great campaign for better lighting. Every type of electric lighting unit is manufactured by the General Electric Company and its specialist corps is constantly engaged in investigating the right type of lighting for communities of all sizes and conditions, with the broad-minded policy of recommending the installation that best fits local conditions.

This movement is largely educational, and we understand that the recommendations of these engineers may be obtained by any city or town that is considering a new lighting system. Recommendations are given on the proper street lighting equipment for the community on the basis of what most favorably suits the local conditions.

SAN DIEGO EXPOSITION

Round Trip Excursions

From **SAN FRANCISCO**
To **SAN DIEGO**

Daily

**Fridays and
Saturdays**

3 Months Return Limit

Return Limit 15 Days

\$28.00



\$22.75

FIRST IN SAFETY

FOR TRAIN SERVICE, ASK SOUTHERN PACIFIC AGENT

Municipal Tree Planting and Lot Cleaning

Editor Pacific Municipalities.

Dear Sir:—In response to your request of February 3rd, I send herewith a few lines in regard to tree planting in the parkings of our streets and boulevards, also a word or two in regard to lot cleaning.

"Lest we forget" it is well to be reminded that for every mile of streets and boulevards we have two miles of street parkings, every part of which stares us in the face all day long—some of it with a much neglected look, a look almost of despair, while a portion of these parkings smile back at us from a bed of green under the protecting boughs of beautiful trees.

In every mile of street there should be reserved an acre or more of parking. These parkings in the average city amount to a great many acres of ground. In our city the parkings contain over fifty acres.

If these parkings were all in one square, it would be very desirable to beautify that square as a park, but the fact that these parkings are at our front door, continually known and seen at all times by all who come and go within our cities, makes it not only desirable, but imperative that they be kept clean and beautiful. I believe those who have observed the parkings of their city carefully will agree with the writer that those parkings upon which are well kept lawns with shade trees properly spaced and cared for, are a great asset and a comfort and pleasure to pedestrians, as well as those who reside in the adjacent dwellings, and while it would be very desirable to have all our parkings thus cared for and beautified, the fact that there is so much vacant property in all of our cities, probably makes it impracticable to have all our parkings in lawn, but the provisions of the "Tree Planting Acts" of 1913 and 1915, make it possible for owners of a majority of the frontage on a block or street or a number of streets to cause trees of their choice to be planted and cared for, and the cost of

such improvement assessed to the property in the district in proportion to the benefits derived. Under the provisions of these splendid laws, the residents of a district, or of a whole community may work out a uniform plan of tree planting for their district, and with the co-operation of their city officials, cause said plan to be successfully carried out.

The greatest obstacle in the way of carrying out any general plan of uniform tree planting is the desire of each individual to plant just such trees as he prefers without taking the time and trouble to help work out a plan for the whole street or district.

In most cities, we find great gaps in the rows of trees which line our streets and boulevards, caused by the failure to plant trees in the parkings in front of the "vacant lots" where, instead of trees and lawn as in front of residences, we see only "weeds."

These splendid Tree Planting Acts of 1913 and 1915 give us who live in these residences and who have to continually behold these great gaps in the otherwise beautiful rows of trees, an opportunity to cause these gaps to be filled with handsome shade trees and those unsightly weeds to be destroyed, if we are willing to give a little time to the task, and are also willing to co-operate with our neighbors to the extent of meeting our proportion of the expense of the legal proceedings as provided by these statutes, even though we have trees already growing in our parkings. I do not mean that we should pay for the other fellow's trees, the planting or caring thereof—just for our proportion of cost of the legal proceedings.

It matters not how large or small the city, each city should have a Forester, whose duty it should be to care for the shade trees along its streets and boulevards, in addition to which he should be competent to advise and encourage people in the planting of shade trees. A man in such a position who would gain the confidence of the people could do

much toward directing and facilitating the planting of shade trees along our streets and highways. Every such man so employed would be a valuable asset to any city and the salary paid him would be a good investment.

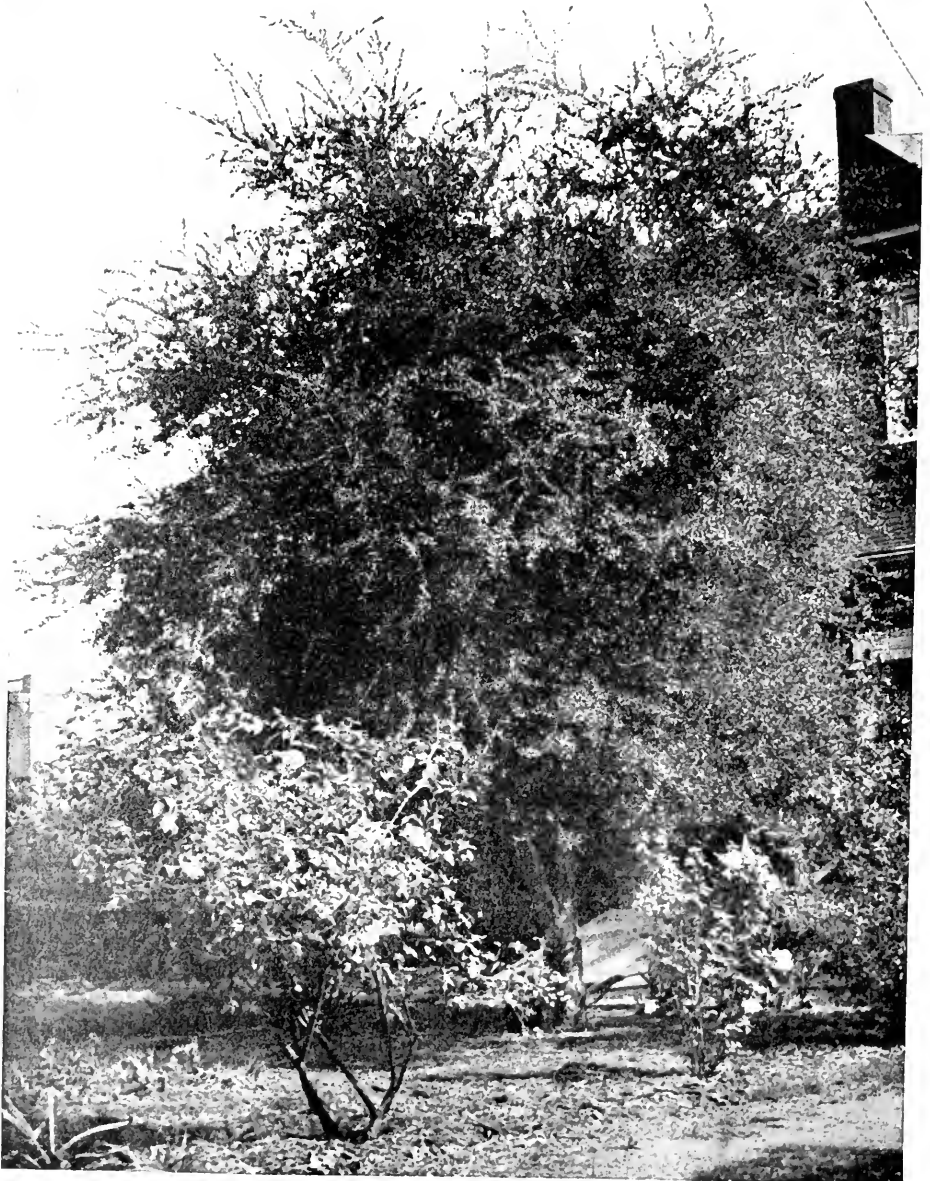
Like most other cities, we have done very little in Glendale towards munic-

ipal tree planting or regulation. We have made a small beginning, however.

The following quotation from our Annual Report for the fiscal year ending June 30, 1915, gives us an idea of what we have done in that respect:

"Although we have no public parks upon which to grow trees, yet we do have

*Nine year old California
Live Oak Tree*



the land dedicated for public use upon which can be grown hundreds of beautiful shade trees to add to the charms of our city. This ground is more than fifty acres in extent and is the most prominently located ground in the city, and its improvement with beautiful shade trees would add tremendously to the city's attractiveness. I refer to the street parkings which in most places have been heretofore sadly neglected.

"Herein lies Glendale's greatest opportunity for city beautification, and it is the function of this department to care for the trees that are already growing in our parkways and to encourage and facilitate the planting of others.

"We have growing in our parkings now 8,954 trees of fifty-eight varieties, most of which are very handsome—the Black Acacia predominates, with Pepper Trees next in number, and third, Camphor Trees.

"Under the tree planting act of 1913 we set out and cared for five hundred and ninety-two parkway trees on Verdugo Road and Colorado Street last year, at an average cost of one dollar and twenty-five cents per tree, including the one season's care. These trees are all doing well and it is to be hoped that many times their number will be set out this year. This tree planting consisted of two hundred and seventy-four Catalina Cherry Trees, eighty-four Camphor Trees, thirty-two Acacia Mollissima and two hundred and two California Live Oaks, all of which are excellent avenue trees.

"I wish to especially mention the live oaks. Contrary to the general idea, these trees grow quite rapidly when given good care, as may be seen by the accompanying photo of a nine year old live oak, which is growing in Mr. G. B. Woodberry's yard at 419 Glendale Avenue.

"Our City Forester has made quite a noticeable improvement in the appearance of our street trees during the last two seasons, so well and carefully has the tree trimming been done that we have had only six complaints come to the office in regard to the manner of tree trimming within the last two years.

"We believe that money spent for planting trees in our parkings and caring for them is a good investment."

LOT CLEANING.

I also quote from same report in regard to lot cleaning:

"Lot cleaning is a new departure of our city activities, and we have been pursuing it with some degree of caution, recognizing that we are treading very closely between the line of public and private rights; nevertheless, no movement has received more hearty public and private approval than this one. The last State Legislature has given us a very good statute, approved May 26, 1915, becoming effective August 8, 1915, which lays down a very simple plan by which this work can be done, and the cost made a part of the regular tax levy. Operating under the provisions of this law, we posted notices to remove weeds on two thousand, three hundred and sixty-nine lots, one thousand and nine of which were taken care of by the owners, leaving one thousand three hundred and sixty lots from which the weeds were removed by this department at an average cost of one dollar and twenty-three cents and a fraction per lot."

Our people have co-operated splendidly in this good work and cheerfully paid the cost of the same at the time of paying their city taxes. A few errors occurred, however, and the necessary adjustments were made to the satisfaction of all parties concerned.

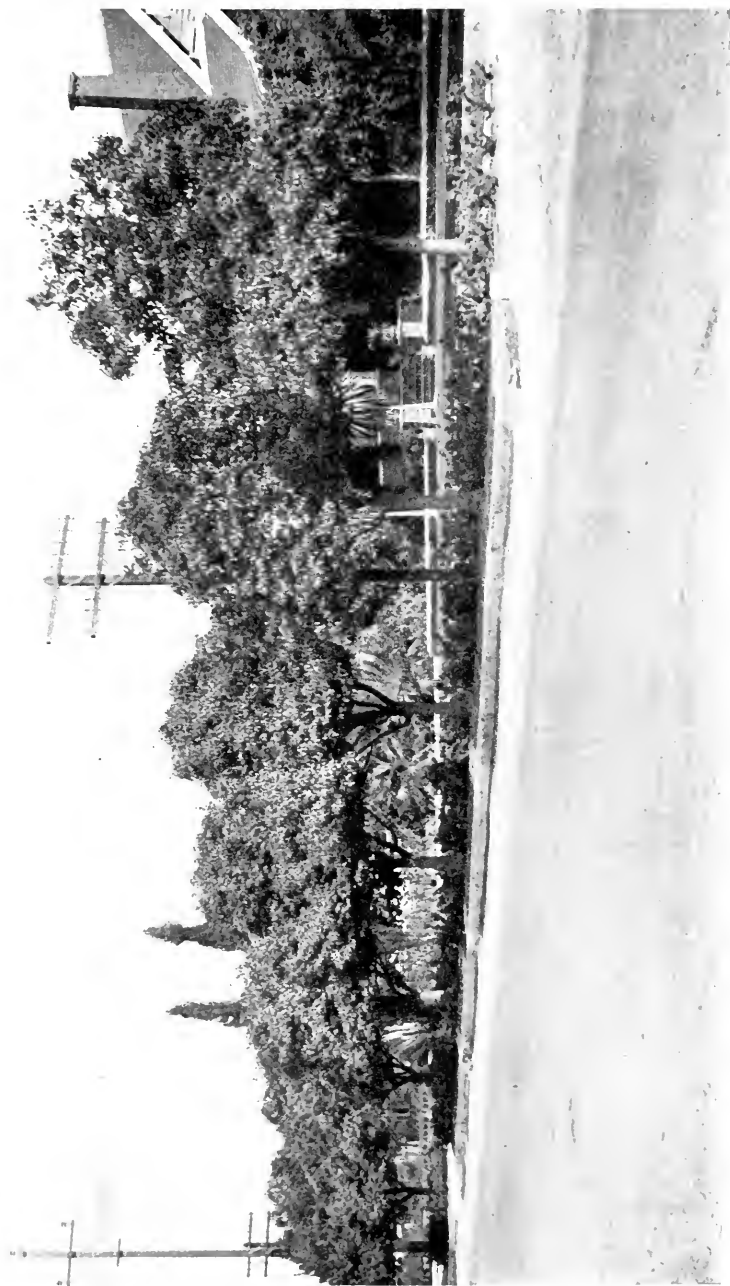
One good result of this lot cleaning is that lot owners are more willing than heretofore to let their lots be used for growing crops of various kinds on condition that the lots be kept clear of weeds during the season. We notice quite an increase in the number of lots used this spring, which will greatly reduce the number of lots to be cleaned next summer.

I believe that municipal tree planting and lot cleaning will soon be generally accepted as permanent functions of city government.

Most respectfully yours,

T. W. WATSON,
City Manager.

*Campher Trees
Corner Central Ave and
Maple Street.*



∴ What Our Pacific Coast Cities Are Doing ∴

Alameda Board of Education has adopted plans for the erection of a school at cost of about \$100,000. Committee has been organized for the purpose of electing freeholders to frame a new charter.

Albany (Cal.) will hold a bond election April 7 to vote \$75,000 bonds for school purposes. Bids will be received April 10 for grading, curbing and guttering portions of Brighton Avenue.

Anaheim will receive bids April 13 for paving portion of East Broadway and also for the paving of West Broadway.

Antioch has passed resolution of intention for the paving of portions of First Street.

Ashland (Ore.) is considering a bond issue for \$30,000 for municipal improvements.

Bakersfield. A petition is being circulated for paving a portion of Seventeenth Street and portion of Twenty-first Street. City is contemplating purchase of sites for park purposes. A new electrolier system will probably be installed.

Berkeley Grammar School Board of Education will receive bids April 25 for school supplies. High School Board of Education will receive bids for supplies on same date. \$36,900 will be spent for construction of sewers this year. Bids were received April 6 for improvement of portion of Dwight Way by reggrading, construction of curbs, gutters, cast iron culverts and paving with asphaltic wearing surface on concrete foundation. The paving of a portion of Fulton Street and Durant Avenue has been ordered.

Callexico received bids April 4 for material for water works extension and material for extensions of sanitary sewers.

Chico will shortly hold a \$100,000 bond election for schools.

Chino has voted bonds for streets and sewers.

Cloverdale received bids March 25 for furnishing new main from the reservoir to Third Street.

Coeur d'Alene (Idaho) Board of Education may vote \$40,000 for school purposes.

Covina has voted \$105,000 for installation of water plant.

Davis has voted \$2,500 for modern fire apparatus.

Dinuba will vote in April on proposition to spend \$7,000 for city hall, \$2,500 for fire house and equipment, and \$500 for city jail.

Fairfield has voted \$48,500 for street improvements.

Fresno State Normal School Trustees received bids March 25 for supplies. Bids were received April 3 for a lot of road oil. A \$500,000 bond election will be held in May for sewers.

Gilroy has adopted plans for a new fire house. Plans have been prepared for construction of concrete bridge at East Sixth Street.

Grass Valley received bids March 18 for construction of library.

Hemet received bids April 3 for \$10,000 bonds.

Hermosa Beach is contemplating the building of sewage disposal plant.

Huntington Beach has ordered construction of main sewer from Fourteenth to Twenty-third Streets.

Inglewood Fire Department want City Council to purchase fire apparatus.

King City has taken steps for the acquisition of a city park.

Lakeport Union High School District has voted \$25,000 for high school.

Lindsay is discussing street paving.

Lodi will vote shortly on proposition to construct paving plant at cost of \$7,500 and construction of municipal baths at cost of \$6,000.

McKittrick will hold an election April 7 to vote tax of \$1,500 to defray expenses of school improvements.

Merced is considering the installing of several fire hydrants. An election will be held April 10 to vote \$10,000 for construction of sewers and \$15,000 for fire apparatus.

Modesto voted \$160,000 bonds for school purposes.

Mojave has voted \$12,000 bonds for school purposes.

Mountain View has passed resolution of intention for construction of sidewalks.

Napa School Board received bids April 6 for school supplies. City Council has taken preliminary steps for extending street improvements.

Newman may purchase a new fire bell.

Novato may pave Grant Street.

Oakdale is agitating fire alarm system. The jail will probably be remodeled. Funds may be raised for purchase of fire trucks.

Oakland has taken preliminary steps to abolish the old swing bridges across Oakland's inner harbor. The authorities are seriously considering erection of bridges of the bascule type to care for the rapidly increasing traffic.

Orange received bids April 3 for air compressor.

Orland has voted \$7,000 to buy land for civic center.

Oroville is discussing proposition to issue bonds to equip fire department.

Palo Alto City Planning Commission is planning many improvements to beautify the city. More street paving will be put down.

Pasadena. A movement is on foot to combine a municipal and school bond election to raise money for educational and civic needs. A \$500,000 issue is suggested as follows: \$200,000 for school improvements \$200,000 for public library, \$25,000 for additional library grounds, \$25,000 for purchase of Arroyo Seco and \$50,000 for purchase and improvement of Monk Hill.

Paso Robles will vote April 10 on proposition to levy special tax for construction of septic tank.

Perris is about to establish a city park.

Redding will vote in April on proposition to build an electric lighting system at estimated cost of \$6,000.

Redwood City received bids April 3 for construction of sewers. Resolution of intention has been passed for construction of artificial stone curbs on several streets.

Roseville has appropriated \$5,000 for reconstruction of city hall.

San Anselmo is considering the building of a concrete bridge at Lansdale Station.

San Jacinto will probably vote bonds this spring for construction of levee.

San Pedro. It is reported that Harbor Commission is contemplating asking for bond issue of \$1,500,000 to improve east basin at north end of Terminal Island. An outfall sewer for entire San Pedro is planned at cost of \$100,000.

Santa Ana is contemplating the purchase of eleven new hydrants. An election will be called in the near future to vote \$10,000 bonds for street maintenance and between \$5,000 and \$12,000 for the rebuilding of bridge.

Santa Monica has had a water bond election petition filed with the city clerk. The proposition is to purchase four water systems. An ordinance has been passed for the paving of several alleys.

South San Francisco received bids April 3 for combination chemical and hose wagon. A new high school is being discussed.

Stockton will spend \$100,000 in near future for sewage disposal plant.

Tulare will shortly call a \$15,000 bond election for auditorium.

Turlock has passed resolution of intention for paving. Trustees have decided to buy a 4-inch centrifugal pump.

Ventura will receive bids shortly for construction of county highway road from Huene to El Rio. Steps will be taken shortly to secure municipal electric light plant.

Watts will vote this month on proposition to issue \$125,000 bonds for sewer system and \$12,000 bonds for fire department.

Willits has passed resolution for paving of portion of Main Street.

Winters will soon have a \$12,000 city hall; bonds were recently voted.

Woodland is agitating better street lighting. A children's playground will be established in park.

CALIFORNIA COUNTIES.

Alameda County supervisors are planning the construction of a Tuberculosis Hospital on a 52-acre tract in the Livermore hills.

Butte County. Paradise Irrigation District will hold a bond issue shortly to vote \$100,000 reservoir improvements.

Contra Costa County received bids March 27 for furnishing labor and material for constructing road with concrete base on Division 2 of the Tunnel Road.

Humboldt County. Loleta section may be paved within the near future. Bids will be received April 11 for clearing out and opening portion of county road.

Kern County. It is said that State will appropriate \$1,500 to help build levee along the north bank of the Kern River.

Los Angeles County is considering election for an outfall sewer for whole county.

Marin County has passed resolution for \$12,000 for building automobile road from Willow Camp to Bolinas. In addition the Board passed another resolution for the widening of Bolinas Road from Fairfax to the summit of Bolinas ridge at cost of \$4,000.

Orange County is contemplating a large bond issue for road work.

San Diego County is contemplating a bond election of nearly \$600,000 for road expenditures.

San Mateo County received bids March 20 for constructing 7.58 miles of highway in Second and Fourth Road Districts; also for the construction of 0.81 miles of highway in Second Road District. Bids were received April 3 for constructing 7.47 miles of highway in Fifth Road District.

Santa Barbara County received bids April 3 for constructing reinforced concrete girder bridge across San Antonio Creek. An election will be held in May to elect board of freeholders to frame a county charter.

Solano County received bids April 3 for grading and paving of portion of county road near Benicia.

Stanislaus County will receive bids April 11 for necessary lamps, appliances and electricity required for lighting the streets in the Denair Lighting District. A new jail will be built at Patterson at cost of about \$4,000. Bonds for road improvements will probably be voted to amount of \$1,500,000.

Tehama County. Red Bluff Union High School received bids March 28 for construction of high school building.

Tulare County will probably call a bond issue for \$1,250,000 for roads.

Tulare, Kern and Kings Counties are discussing ways and means for the purpose of building road to Mt. Whitney.

Ventura County received bids April 6 for construction of La Crosse and Casitas bridges.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Superintendent for the cemeteries**, appointing. Sacramento, 1.
- Buildings partially destroyed by fire**, providing for the removal of. Sacramento, 2.
- Garbage**, providing for the collection of. Berkeley, 3.
- Mechanical Engineers**, Board of, providing for appointment of. Los Angeles, 4.
- Jitneys**, regulating. Yreka, 4.
- Milk, cream and other dairy products**, regulating the sale of. Yreka, 5.
- Rialto, 91.
- Fire Chief**, creating position of. Maricopa, 6.
- Building districts**, creating. Berkeley, 7.
- Police force**, creating. Santa Barbara, 8.
- Dog tax**, imposing. San Bruno, 9.
- City Planning Commission**, creating. Santa Monica, 10.
- Rain or waste water flowing over sidewalks**, prohibiting. Rialto, 11.
- Electrical inspector**, creating. Walnut Creek, 12.
- Bankrupt sales of merchandise**, imposing a license tax upon the business of. Reedley, 13.
- Tractors and tractor engines**, licensing and regulating. Kings County, 14.
- Travel and traffic**, regulating. Los Angeles, 15.
- Intoxicating liquors**, regulating the sale and manufacture of. Los Angeles, 16.
- Highways**, providing for the construction and care of. Kings County, 17.
- Health, sanitary and quarantine regulations**, providing. Los Angeles, 18.
- Fire ordinance**. Los Angeles, 19.
- Service deposits for water, gas and electric current**, regulating the making of. Los Angeles, 20.
- Motion pictures**, regulating. Los Angeles, 21. 70.
- Boxing contests and sparring exhibitions**, regulating. Los Angeles, 22.
- Dead animals**, regulating the removal and disposal of. Los Angeles, 23.
- Bath houses**, regulating. Los Angeles, 24.
- Pigeons and doves**, regulating the keeping of. Los Angeles, 25.
- Carriages, public**, regulating. Los Angeles, 26.
- Garbage**, regulating the collection, removal and disposal of. Los Angeles, 27.
- Billboards and advertising structures**, regulating. Los Angeles, 28.
- Sidewalks**, prohibiting unpacked goods upon. Los Angeles, 29. 30.
- Public meetings in streets**, regulating. Los Angeles, 31.
- Water rates**, fixing. Los Angeles, 32. 43.
- Skating rinks**, regulating. Los Angeles, 33.
- Sidewalks**, regulating the construction of openings in. Los Angeles, 34.
- Motion picture films**, regulating the use, repair and storage of. Los Angeles, 35.
- Hospital, sanitariums and maternity asylums**, regulating. Los Angeles, 36.
- Weightmaster**, appointing. Los Angeles, 37.
- Garages and automobile filling stations**, regulating. Los Angeles, 38.
- Advertisements**, regulating the posting of. Los Angeles, 39.
- Day nurseries, homes, boarding houses or other places for the care of children**, regulating. Los Angeles, 40.

- Public utilities, rules and regulations for the government of. Los Angeles, 41.
- Midwifery, regulating the practice of. Los Angeles, 42.
- Auctions, regulating. Los Angeles, 43.
- Electric light wires, regulating the stringing of. Los Angeles, 44. 58. Inglewood, 92.
- Fruit, vegetables and poultry by weight, regulating the sale of. Los Angeles, 45.
- Efficiency Commission, creating. Los Angeles, 46.
- Shoddy, regulating the manufacture, sale and storage of. Los Angeles, 47.
- Towel, prohibiting the use of. Los Angeles, 48.
- Food, adulterated or mislabeled, prohibiting the sale of. Los Angeles, 49.
- Barber shops, regulating. Los Angeles, 50.
- Smokestacks, regulating the discharge from. Los Angeles, 51.
- Bakeries, regulating. Los Angeles, 52.
- Humane Animal Commission, creating. Los Angeles, 53.
- Municipal market department, creating. Los Angeles, 54.
- Milk depots, regulating. Los Angeles, 55.
- Refuse and rubbish, regulating the removal of. Los Angeles, 56.
- Restaurants, regulating. Los Angeles, 57.
- Slaughter houses, regulating. Los Angeles, 58.
- Meat, fish, game and poultry, regulating the sale of. Los Angeles, 59.
- Dogs, requiring to be muzzled. Los Angeles, 60.
- Curbs, sidewalks and gutters, regulating the construction of. Los Angeles, 61.
- Dance halls, regulating. Los Angeles, 62, 72.
- Fish, regulating the sale of. Los Angeles, 63.
- Sale of merchandise upon the installment, co-operative or club plan by solicitors, regulating. Los Angeles, 64.
- Oil Inspector, creating the office of. Los Angeles, 65.
- Store department, creating. Los Angeles, 66.
- Fruit or vegetables, regulating the sale of. Los Angeles, 67.
- Weeds and rubbish, providing for the removal of. Los Angeles, 68.
- Gas, regulating the sale and use of. Los Angeles, 69.
- Signs and bulletin boards, regulating. Los Angeles, 71.
- Morgues, regulating. Los Angeles, 73.
- Pawnbrokers and junk dealers, regulating the business of. Los Angeles, 74.
- Weapons and devices, regulating the making and keeping of. Los Angeles, 75.
- Buildings, providing for the removal of. Los Angeles, 76.
- Tenement houses and hotels, regulating. Los Angeles, 77.
- Clothes cleaning establishments, regulating. Los Angeles, 78.
- Municipal wharves, fixing rates. Los Angeles, 79.
- Intoxicating liquors, regulating places where sold. Corona, 80.
- Jitneys, regulating. Yreka, 81.
- Water, regulating rates and service. Orange, 82.
- Bathing, prohibiting persons from appearing on the streets unless properly covered with robe. Alameda, 83.
- Gambling, prohibiting. Dinuba, 84.
- Bee diseases, to prevent. Siskiyou Co., 85.
- Automobile whistles and horns, regulating the use of. Napa, 86.
- Moving vehicles, requiring persons owning to file a weekly statement of removals. Sacramento, 87; San Bruno, 101.
- Cows and swine, regulating the keeping of. Riverside, 88.
- Plumbing, prescribing rules and regulations governing. Sacramento, 89; Inglewood, 93.

- Pound**, establishing. Riverside Co., 90.
- Fire ordinance**. Albany, 94.
- Boxing contests**, regulating. Bakersfield, 95.
- License taxes**, imposing upon certain businesses. San Mateo, 96.
- Travel and traffic**, regulating. Sacramento, 97.
- Milk**, regulating the handling of. Sacramento, 98.
- Streets**, directing the closing of. National City, 99.
- Firearms**, prohibiting the discharge of. San Bruno, 100.
- Bonded indebtedness**, providing for the incurring of. Santa Maria, 102; Winters, 108.
- Business and occupations**, licensing. Dinuba, 103.
- Nuisances**, declaring certain acts to be. Corcoran, 104.
- Insanitary toilets and cesspools**, preventing the maintenance of. Fresno Co., 105.
- Rubbish**, to prevent the dumping of on public highways. Fresno Co., 106.
- Salaries of officials**, fixing. Arcadia, 107; National City, 117; Chino, 118.
- Animals**, prohibiting the running at large of (amend.). National City, 109.
- Intoxicating liquor**, regulating the keeping and disposition of. Hoquiam, Wash., 110.
- Gaming devices and games of chance**, prohibiting females from managing. Los Angeles, 111.
- Water works**, regulating the temporary cessation of service of. Los Angeles, 113.
- Railway cars**, fixing the rates of compensation to be charged. Los Angeles, 114.
- Sewers and cesspools**, authorizing the Health Commissioner to condemn certain kinds of. Los Angeles, 115.
- Auctioneer of jewelry**, licensing. Sacramento, 116.
- Prohibiting persons riding bicycles or wearing roller skates, from taking hold of or stealing rides on street cars and other vehicles**. Los Angeles, 119.
- Picketing, carrying banners, or speaking in public streets in a loud tone, for certain purposes**, prohibiting. Los Angeles, 120.
- Oil pipe lines**, regulating. Los Angeles, 121.
- Wheel gate valves in gas service pipes**, providing for the installation of. Los Angeles, 122.
- Street cars**, requiring fenders on. Los Angeles, 123.
- Street cars**, regulating the speed of. Los Angeles, 124.
- Automobiles owned by the city**, regulating the use of. Los Angeles, 125.
- Electricity**, regulating the charges. Los Angeles, 126.
- Telephone**, regulating the charges. Los Angeles, 126.
- Butter**, regulating the sale of. Los Angeles, 127.
- Industrial districts**, prescribing the method of making and filing petitions for. Los Angeles, 128.
- Sewers**, requiring connections to be made with. Los Angeles, 129.
- Soliciting custom or patronage on streets, railway trains, boats, and depots**, regulating the business of. Los Angeles, 130.
- Theaters, hotels and lodging houses**, requiring certain equipment for extinguishing fire in. Los Angeles, 131.
- Stands, wagons and carts**, prohibiting the maintenance of upon certain streets. Los Angeles, 132.
- Franchises for wharves, piers, etc.**, prescribing the method of procedure for granting. Los Angeles, 133.
- Building material in streets**, regulating the maintenance of. Los Angeles, 134.
- Warehouses**, prescribing the procedure for the granting of permits for the use of. Los Angeles, 135.

Streets required by law to be paved by railway corporations, prescribing the manner in which they shall be paved and repaired. Los Angeles, 136.

Trees, shrubs and grass along the streets, providing for the care and protection of. Los Angeles, 137.

Poles and anchors, regulating the erection, location and moving of. Los Angeles, 138.

Culverts, regulating the construction of. Los Angeles, 139.

Excavations in streets, regulating. Los Angeles, 140.

Franchises and permits on streets, prescribing a method of procedure for granting. Los Angeles, 141.

Poles for the support of railway trolley wires, regulating. Los Angeles, 142.

Horse races, prohibiting betting on. Los Angeles, 143.

Streets, providing a method for changing the names of. Los Angeles, 144.

Spur tracks, regulating the granting of permits for. Los Angeles, 145.

Weeds? Why, It's Easy to Kill Them With the Atlas "A" Method

This can be Obtained by Using

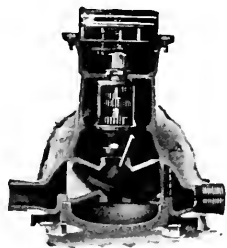
"ATLAS A. WEED KILLER" Which Destroys all Existing Vegetation—Seeds and Roots. No Danger from Grass Fires after Application.

Atlas Preservative Company of America, Inc.

RIALTO BUILDING

Write Us For Literature

SAN FRANCISCO, CAL.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

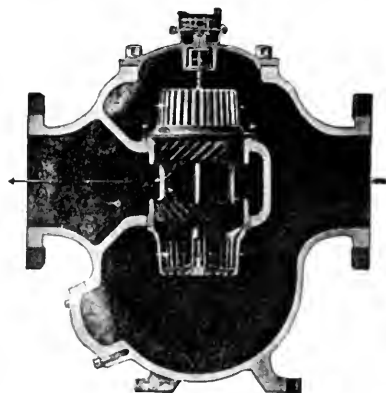
Split Case Meters for Warm Climates

C. I. Breakable Frost Bottoms for Cold Climates

Hot Water and Oil Meters

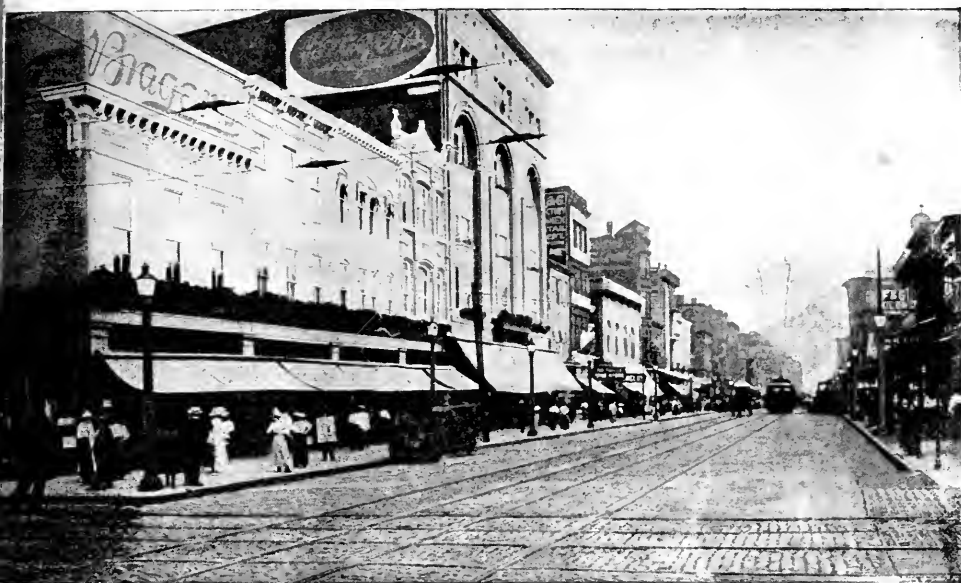
Crest Meters for Large Flows

Compound Meters for all Streams, Large and Small



TRIDENT CREST

SAN FRANCISCO OFFICE
320 Market Street



Extend the Business Section With Ornamental Luminous Arc Lamps

A "White Way" installation brings additional merchants into the main thoroughfare. Prepare for this future growth—lengthen your principal business street by making a "White Way" extension.

Attract new merchants to your town and give them "a place in the sun".

Extend the facilities that make for progress and a bigger, better, brighter, busier city.

Talk to the real estate and other business men in your town on this proposition. Any of our representatives will be glad to confer with you.

Write for bulletin and literature on the Ornamental Luminous Arc Lamp for white way lighting.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
24 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.

6159

Mention "Pacific Municipalities" when writing for catalogs.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

N Neptune Meter Co., S. F. & L. A.

National Meter Co., 141 New Montgomery St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

The American City

published at 87 Nassau Street, New York (Chicago office, 327 South La Salle St., San Francisco office at 320 Market Street,) has just published its annual

MUNICIPAL BUYERS' GUIDE FOR 1916

This guide is a book of 156 pages containing classified lists and information in regard to the products of over three hundred advertisers in THE AMERICAN CITY, representing leading manufacturers of road building and paving materials and machinery, water works supplies and equipment, street lighting, drinking fountains, trash and garbage cans, fire department apparatus and supplies, trees and shrubbery, as well as mechanical equipment for park and cemetery use, etc. Names are also included of many leading consulting engineers and landscape architects available for municipal improvement undertakings.

The price of this Buyers' Guide is 50 cents, but any official having to do with purchases of machinery or supplies may secure a copy free of charge by making request for same to our nearest office.

The American City

87 NASSAU STREET
New York City

320 MARKET STREET
San Francisco, Cal.

327 SOUTH LA SALLE ST.
Chicago, Ill.

In addition to sending the Municipal Buyers' Guide free of charge, we shall also be glad to send you a copy of THE AMERICAN CITY (in case you are not already a reader of it) together with an attractive combination subscription offer which we are making in connection with "Pacific Municipalities".

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:

Monadnock Bldg.

Northwest Office:

Northwestern Bank Bldg., Portland, Ore.

General Offices:

Burlington, N. J.



SERVICE



FIRST



ARMCO IRON Full Circle Part Circle CULVERTS

A neat and permanent improvement to any street or roadway.
Quickly and easily installed at a low cost Particulars covering various sizes and gauges sent on request.

California Corrugated Culvert Company

411 Leroy St., LOS ANGELES

400 Parker St., WEST BERKELEY

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes

WE MAKE THE

CROWN

EMPIRE

NASH

GEM

EMPIRE COMPOUND

PREMIER METERS

Write for

Catalogue

TYPE K NASH METER

The

SIMPLEST

DISC METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK

VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York

London

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Vancouver, B. C.

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements
OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES
OREGON — WASHINGTON — IDAHO
THE MUNICIPAL LEAGUE OF MONTANA
—AND—
BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Street Lighting	H. E. Mahan	171
Trade Notes		177
The Improvement Bond Act of 1915 Declared Valid.....		178
Progressive St. Augustine.....		178
Editorial—		
Questions and Answers Department.....		179
Framing New Ordinances		179
A Model Charter		179
A Handbook for City Officials.....		180
A New Book on City Planning.....		180
Richmond's Milk Ordinance		181
Building Construction as Affecting Fire Risks.....		182
Public Health and the Somers System.....		191
Vallejo Municipal Water System Splendid Investment.....		192
The Cities and the Babies.....		192
What Our Pacific Coast Cities Are Doing.....		193
Titles of New Ordinances Received.....		196

LEAGUE OF CALIFORNIA M U N I C I P A L I T I E S

ORGANIZED 1897

— OFFICERS —

President	- - - -	(City Clerk of San Diego)	- -	ALLEN H. WRIGHT
First Vice-President	- -	(City Attorney of Napa)	-	WALLACE RUTHERFORD
Second Vice-President	- .	(Pres. Board of Public Works of Los Angeles)	- -	LORIN A. HANDLEY
Secretary	-	H. A. MASON	Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 5

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

MAY, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

STREET LIGHTING

Written Expressly for Pacific Municipalities

By H. E. MAHAN

EDITOR'S NOTE.—Mr. Mahan is a graduate of Drexler Institute of Philadelphia in the Electrical Engineering Department. After graduation he took a position with the Philadelphia Traction Company in the Engineering Department, where he stayed for three years before coming into the employ of the General Electric Company. He is one of the brainiest members of Mr. Ryan's corps of engineers in the Illuminating Engineering Department and has done a great deal of research work along engineering lines. Mr. Mahan is a member of the National Illuminating Engineering Society, standing well to the fore in ability.

Light, from the earliest times, has been regarded as the antagonist of evil. We can trace this idea from the birth of civilization; from Egypt, where we find the sun, stars, moon, etc., as objects of worship, to the present day, where light still plays its part in our modern churches as a symbolism. There is good and sufficient reason for this feeling which we associate with light and, to realize it, we have only to refer to history and learn of the feeling of primitive man when the passing of daylight left him in darkness. It was then that the forces of evil were liberated and a feeling of helplessness overtook man. He confessed himself to be at the mercy of the evil spirits that had their

abode in the darkness and who spread their terror throughout the night.

The evidence that crime and darkness go hand in hand is very strong and the present tendency is toward more light on our city streets. Scientific investigation by competent engineers is becoming recognized as a desirable antecedent to the adoption of a street lighting system in order that it may satisfactorily meet the requirements imposed by traffic conditions, arrangement, use and paving of streets, character of buildings, their uses, etc., etc. We say an ounce of prevention is worth a pound of cure, yet it is interesting to note that while street lighting may be considered as the most important preventive of



crime and the police department the cure, on the average only about half of the money expended for the latter is appropriated for the former.

Another service performed by street lighting, which is becoming increasingly more important, due to the popularity of the motor car, is its assistance in facilitating traffic. The efficient dispatching of traffic in the cities of the country is a subject receiving a great deal of study and the important influence lighting has upon it can be realized by the following figures obtained from the city of London, which show the increased number of accidents resulting from reducing the street lighting during war times. The three months of enforced darkness were October, November and December, 1914.

TRAFFIC FATALITIES IN THE METROPOLITAN AREA AND THE CITY OF LONDON
IN EACH MONTH OF THE YEARS
1913 AND 1914.

	1913	1914
January	43	30
February	39	40
March	55	47
Total.....	137	117
April	43	33
May	67	43
June	53	50
Total.....	163	126
July	66	54
August	47	54
September	54	71
Total.....	167	179
October	47	92
November	55	55
December	56	89
Total.....	158	236

The well recognized advantages of properly lighted streets in facilitating pedestrian travel, reading house numbers, added attractiveness, etc., etc., while extremely important, are perhaps secondary to the assistance rendered the police and traffic service.

In general, it is true that illumination has been ignored as a division of municipal engineering, but it is gradu-

ally receiving its deserved recognition, and indications are that the municipal illuminating engineer will in a short time be considered a necessary adjunct to the progressive city organization. The investigation carried on by the writer prior to the preparation of this article indicates a wide variance in policy relating to the supervision of the city lighting. Many cities have vested authority with the department of water and gas, a few have separate bureaus of lighting, while the majority have placed the responsibility for the supervision and standards of lighting with a committee of councilmen and elicit the assistance of the police department to report outrages. Illumination is one of the most recent branches of engineering and in the past decade has made very rapid advances, with the result that those not closely identified with the science are unfamiliar with the best practice. We, therefore, find in many instances that those directing the lighting practice of municipalities are not qualified either by training or experience to serve the best interests of the city. In short, it appears that most city lighting systems suffer from improper supervision and inadequate appropriations, both the result of the failure on the part of the city authorities to appreciate its real importance.

PRESENT PRACTICE IN CITY LIGHTING.

Conditions of the Problem.

When the term street lighting is used in its general sense, it includes the busy streets of the down town sections, the tree-bordered streets of the residential sections, the sparsely settled country road, and the automobile highway. To discuss street lighting without recognizing these divisions, is obviously absurd, as the conditions encountered are so entirely different as to make a lighting system for one class of streets entirely unsuited to another. Again, conditions may vary within any one zone so as to require special treatment; therefore, street lighting, in common with other engineering work, demands a thorough study of the conditions surrounding the problem and a treatment in accordance with the findings therefrom. Let us

roughly note the principal characteristics peculiar to the zones which we have arbitrarily selected.

Downtown Streets.

It is in this section that traffic is heaviest, the streets in general are wide and bordered by business houses with brightly lighted windows and display signs; this latter feature varying in accordance with the size of the city. It is in this section that the city authorities endeavor to make an attractive appearance, in order to attract industries and business houses to their city and to create the general impression of progressiveness and thrift. We, therefore, find the demand for ornamental light-

trees, large units may be employed and thus the highest efficiency in light production be realized. It is also desirable in this section to distribute some light in the upper hemisphere in order to illuminate the building facades.

Residential Section.

In the residential section the streets are, in general, narrower and bordered by trees which, of course, tend to cast shadows and interfere with the distribution of the light. Smaller units are, therefore, necessary and the spacing should be such as to eliminate as far as is practicable the dark spots due to the shadow from the trees. Both the sidewalk and roadway should be lighted,



Street Illumination at Baltimore, Md., by Ornamental Luminous Arc Lamps.

ing standards which, aside from adding to the attractiveness of the street, fulfill the utilitarian requirements also.

The requirements for this service are high intensity and good diffusion, with a color of light that will permit the show windows and signs to appear to good advantage in contrast with the street lighting. Inasmuch as the streets in this section of the city are free from

also the house fronts, but an equipment which casts a glare in the house windows or is objectionably bright to pedestrians should be avoided. The appearance of the unit is a factor for consideration in residential sections.

Outlying Section.

When we come to the outlying sections we find that in most cities the lamps are few and far between and

serve merely as road markers. It is true that less light will suffice in this section than in either of the other two mentioned, but sufficient illumination should be provided to keep pedestrians and vehicles in view at all times, either by direct light from the unit or in silhouette against the bright zone surrounding the unit. Large units can usually be employed in this class of lighting unless the presence of trees make small units at relatively frequent spacing necessary.

Highway Lighting

The demand here is for safety combined with facility for high speed. Freedom from objectionable glare is necessary for comfortable driving, and suffi-

hard and fast general rule can be laid down as to where an arc lamp should be used or where an incandescent lamp is best suited. Such a decision can be reached intelligently only by a study of all the local conditions influencing the choice.

The most popular type of arc lamp for street lighting is the so-called luminous arc lamp, illustrated in various forms in Figure 1. The source of light is the same in all the various types, differing only in the equipment provided for distributing the light which is very important. The arc in the luminous lamp is struck between an upper or positive electrode of copper and a negative or lower electrode of a special composition. The resulting light is white in color, ap-



"Silhouette Lighting in Outlying Districts and on Highway."
Installation of Luminous Refractor Arc Lamps at Chico, Cal.

cient light to make evident irregularities in the road is also needed, as glaring headlights are frequently extinguished through courtesy or by law on such roads.

The Lighting Units

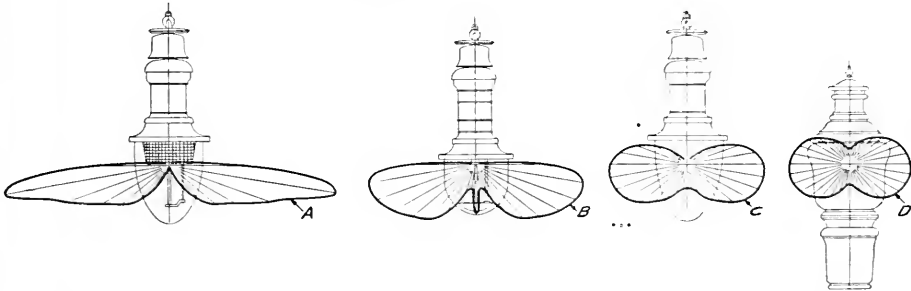
A few years ago the arc lamp was the only suitable light source for street lighting; today, the high power incandescent lamp has entered the field and has increased the range of choice. No

proaching daylight in its spectral composition.

A wide range of sizes is available in the incandescent field which permits the designer to select the size of unit best suited to the conditions at hand. The development of the gas-filled lamp with its high efficiency and the available equipments for controlling the light by means of refractors, reflectors and glassware, has made this type of unit a very

ARC LAMPS FOR STREET LIGHTING

COMPARATIVE DISTRIBUTION CURVES



- A - 5 AMP. D.C. SERIES LUMINOUS ARC LAMP, FORM 17, EQUIPPED WITH CLEAR GLOBE & PRISMATIC GLASS BAND REFRACTOR
 B - 5 AMP. D.C. SERIES LUMINOUS ARC LAMP, FORM 6, EQUIPPED WITH CLEAR GLOBE & INTERNAL CONCENTRIC REFLECTOR
 C - 5 AMP. D.C. SERIES LUMINOUS ARC LAMP, FORM 17, EQUIPPED WITH DIFFUSING GLOBE & INTERNAL CONCENTRIC REFLECTOR
 D - 5 AMP. D.C. SERIES ORNAMENTAL LUMINOUS ARC LAMP, FORM 10, EQUIPPED WITH DIFFUSING GLOBE

W.D.A. RYAN
 ILLUMINATING ENGINEER
 ILLUMINATING ENG. LABORATORY
 GENERAL ELECTRIC CO.
 SCHENECTADY, N.Y.
C-34707

Fig. 1.

"The Black Lines across the lamps indicate the relative light intensity at the various angles."

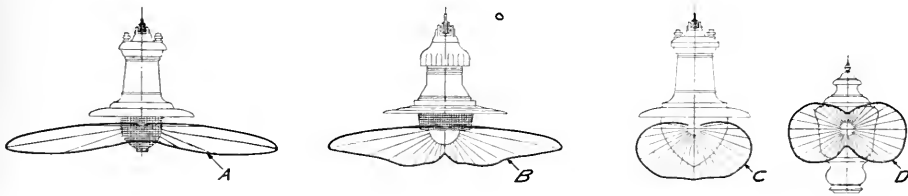
practical and universally useful one. Various forms of these units with their characteristic distribution curves may be seen in Figure 2.

The Size of Unit

Light, in common with most other commodities, is produced most economically in large quantities; therefore,

INCANDESCENT STREET LIGHTING UNITS

COMPARATIVE DISTRIBUTION CURVES



- A - NOVALUX PENDENT UNIT, FORM 6, EQUIPPED WITH 400 C.P. MAZDA SERIES LAMP, 20" PORCELAIN ENAMEL STEEL REFLECTOR & PRISMATIC GLASS BOWL REFRACTOR
 B - NOVALUX PENDENT UNIT, FORM 2, EQUIPPED WITH 400 C.P. MAZDA SERIES LAMP, 18" PORCELAIN ENAMEL STEEL CONCENTRIC REFLECTOR & PRISMATIC BAND REFRACTOR
 C - NOVALUX PENDENT UNIT, FORM 6, EQUIPPED WITH 400 C.P. MAZDA SERIES LAMP, 20" PORCELAIN ENAMEL STEEL REFLECTOR & DIFFUSING GLOBE
 D - NOVALUX ORNAMENTAL UNIT, FORM 4, EQUIPPED WITH 600 C.P. MAZDA SERIES LAMP, ALUMINUM PAINT FLAT STEEL REFLECTOR & DIFFUSING GLOBE

W.D.A. RYAN
 ILLUMINATING ENGINEER
 ILLUMINATING ENG. LABORATORY
 GENERAL ELECTRIC CO.
 SCHENECTADY, N.Y.
C-34437

Fig. 2.

"The Black Lines across the lamps indicate the relative light intensity at the various angles."

from a purely economic point of view, it is desirable to employ the largest type of unit available. But, on the other hand, it is not economical to provide more light than is necessary; therefore, we have this limitation on the size of unit. Furthermore, it must be determined what the most effective way to distribute the light is; whether uniformly or by alternate bright and dark zones. This latter method is called silhouette lighting and is effective by silhouetting objects against the bright area surrounding the unit. At this point we have only personal opinions and experiences to guide us as the question is complicated by various psychological and physiological influences which at present are incapable of exact representation. It appears, however, that where the total quantity of light available for a given length of street or road is small, much better results are obtained by applying it in bright zones; that is, silhouette lighting. On the other hand, if the quantity is relatively great it appears to be most effective to approximate uniformity. Just where the turning point

is for these two systems it is difficult to indicate but must be left to the judgment of the engineer. Foliage, curves in road, bridges, crossings, etc., also influence the question of size and location of units so that the spacing, and consequently, the size of unit must be apportioned in accordance with the existing conditions. A study to determine the relative importance of these various factors must be made and a proper compromise arrived at in order to obtain best results. The general statement, however, may be made that it is advisable to use the largest unit possible, consistent with the proper distribution of light and absence of glare.

SPACING, SUSPENSION AND DISTRIBUTION.

Location of Lighting Units.

For general lighting in residential sections, suburban roads, or in districts where the number of lamps do not exceed about two per block, the units are usually placed on one side of the street, as such locations produce certain construction economies that outweigh any illumination advantages resulting from



TWENTY-FOURTH STREET, MINNEAPOLIS.
Illuminated with Luminous Arcs.
"A good example of residence section lighting."

any other arrangement. When we come to consider ornamental lighting, however, in the downtown sections we find that the arrangement of units has a much greater influence on the results affecting both the illumination and aesthetic conditions.

From an appearance standpoint, an arrangement of units on both sides of the street and placed opposite produces the most pleasing result but such an arrangement on narrow streets and with long spacing would create a very non-uniform or spotty illumination. The placing of units on both sides of the street but in staggered positions favors uniformity of illumination but at a sacrifice in artistic appearance. In general, a parallel arrangement is preferable where the distance between units is about equal to or less than the width of the street, in other cases a staggered arrangement is usually employed.

Glare

Glare is applied to a lighting system when the relative brightness of the source compared to the surroundings is so great as to cause inconvenience in seeing or ocular discomfort. That it is a relative condition may be demonstrated by noting the glare caused by some lighting unit, even when diffusing glass is used, when located along an otherwise dark road and, on the other hand, the entire absence of any feeling of glare from exposed brilliant light sources located along our modern white-way thoroughfares. For the same reason a light source may be suspended lower in the downtown section than in the residential streets without causing objectionable glare. In order to eliminate glare, therefore, it is necessary to consider the surroundings of a street in order to properly equip the lighting units.

The usual methods employed for reducing the glare from a lighting unit are, (1) placing the unit high and away from the line of sight; (2) the use of diffusing glassware to reduce the intrinsic brightness to an unobjectionable degree, and (3) the use of reflectors to screen the light source entirely from view.

Color

The question of color also plays an important part in street lighting although frequently ignored. Take for example, the business section of a city where the merchants' stores and windows are illuminated to attract the attention of the passerby. It is the contrast between the interior lighting and the exterior lighting which measures the degree of attractiveness which the lighting affords and as stores in general are lighted in a tone favoring the warmer colors, best results are usually obtained when the street lighting approaches white. The color of light is dependent first upon the inherent spectrum of the light source, and secondly, upon the transmission spectrum of the enclosing glassware. The spectrum of practically all light sources used for street lighting is such that any desired hue may be obtained by the use of proper glassware.

In this article an attempt has been made to indicate that street lighting is an essential function of a municipal government and that there are certain well defined principles that govern its design. Only the more important influences have been considered and these in only a general way. It is gratifying to report, however, that the science and art of street illumination is being carried along with the current of development in modern city planning and management and is gradually assuming a place in keeping with its importance.

TRADE NOTES.

The Kinney Manufacturing Company of Boston has recently issued some new catalogues describing their road and highway machinery. Particular attention is called to their hand-spraying tar and asphalt heater, pressure being supplied by the well-known Kinney pump, and the material heated in a welded non-leakable kettle, which they claim is the best and most practical combination for handling hot material for road building in municipalities. The catalogue is well illustrated, and engineers and street superintendents may obtain copies by addressing the San Francisco branch, 316 Rialto Building, and mentioning Pacific Municipalities.

THE IMPROVEMENT BOND ACT OF 1915 DECLARED VALID

(Excerpt from the Decision of the Court.)

Civil No. 1869. First Appellate District. May 1, 1916.

Federal Construction Co. (a Corporation), Petitioner, v. Eric Wold, as Superintendent of Streets of the City of Burlingame, Respondent.

Application for a Writ of Mandate prayed to be directed against Eric Wold, as Superintendent of Streets of the City of Burlingame.

By the Court.

This is an application for a writ of mandate directed to the superintendent of streets of the city of Burlingame.

The petitioner is the contractor to whom was awarded the contract for the doing of certain street and other work in said city under the Improvement Act of 1911 (Stats. 1911, approved April 7, 1911), and the Improvement Bond Act of 1915 (Stats. 1915, approved June 11, 1915). It is sought to obtain the order of this court that the respondent should enter into the contract with the petitioner for the doing of said work. The respondent has declined to sign said contract upon the ground, amongst others, that said bond act is unconstitutional, and upon the grounds of certain alleged irregularities in the proceedings leading up to the award of the contract.

With reference to the constitutional point, it appears that the Bond Act of 1915 provides that the municipality, in the absence of any other purchasers, must purchase all property offered at delinquent sales for the non-payment of street assessments. It is contended that such a provision is in effect an incurring of liability not to be satisfied during the current fiscal year in which the same is incurred, and not supported by a two-thirds vote of the electorate, and hence violative of section 18 of article XI of the State constitution. This objection, if tenable, merely would render the provision requiring the municipality to purchase property offered

at delinquent sales unconstitutional. It would not affect the validity of the balance of the act. However, it has been held that this section of the constitution only refers to the acts or contracts of a municipality and not to liabilities which the law places upon municipalities (Lewis v. Widber, 99 Cal. 412; Welsh v. Strother, 74 Cal. 413; Cashin v. Dunn, 58 Cal. 581).

Furthermore, it appears that under section 11 of this so-called Bond Act of 1915 a municipality can escape the responsibility for the purchase of property by the action of its council in providing for the collection of delinquent assessments by foreclosure suits. The liability, therefore, is in effect contingent upon the future acts of the municipality, and would not be within the constitutional restriction.

* * * * *

The other points urged by the respondent do not seem to be worthy of especial consideration.

A peremptory writ of mandate will, therefore, issue forthwith in conformity with the prayer of the petition on file.

PROGRESSIVE ST. AUGUSTINE

The oldest city in the United States, St. Augustine, Fla., is one of the most progressive. The municipality has the commission-manager plan of government, and reserves to its citizens control over the officials through the initiative and referendum and the recall.

The new charter of St. Augustine, adopted June 7, 1915, also provides for full publicity of official acts, and yet eliminates wasteful methods of legal advertising. A "civic plan" for the city is also provided for.

The basic idea of the charter is to provide a system of municipal government responsible and responsive to the will of the people, and efficient in operation.

The new charter was sponsored by the local chamber of commerce. A salary of \$3,000 a year is provided for the city manager. St. Augustine has a population of 5,500.—Kansas Municipalities.

QUESTIONS AND ANSWERS DEPARTMENT.

In this connection attention is again called to the desirability of having all legal questions come through the city attorneys. It is absolutely unjust to the city attorneys and unfair to the secretaries' office to go over the city attorney's head and write to the secretaries' office for opinions on legal questions without first taking the matter up with the city attorney. It is unfair to the secretaries' office because frequently the official asking the question will not give a full explanation of the case and the different legal points involved, which is necessary in order to be able to answer the question properly.

A MODEL CHARTER.

The referendum provisions in the model charter were inserted by a majority vote of the committee. They con-

tain no new ideas, but are substantially the same as the provisions of the California statutes. They are not as good as those of the San Francisco charter which limits the use of the referendum to a very few matters such as the sale of real estate over a certain value, the granting of franchises, etc. There is no necessity for having the referendum apply to ordinances which are purely of an administrative character, for the reason that such ordinances may be repealed through the initiative if objectionable. The model charter makes the city manager the chief executive officer of the city and provides that he shall be chosen by the council solely on his executive ability and administrative qualifications. The choice shall not be limited to residents of the city or State. The manager makes all appointments, except as otherwise provided in the charter. He is to be present at all meetings of the council. The charter makes provisions for six administrative departments, to-wit: Law, Health, Works and Utilities, Safety and Welfare, Education, and Finance. It provides that education may not be included if the existing school system is satisfactory. At the head of each of these departments there shall be a director appointed by the manager whose appointment shall be based on his general executive and administrative experience and ability, and on his education and training, according to the particular character of the work he is to administer. The directors may be removed by the manager at any time, but written charges must be preferred if demanded by any director and a public hearing granted, before the order of removal is made final. The directors are immediately responsible to the city manager for the administration of their respective departments and their advice in writing may be required by him at any time.

The provisions of the model city charter covering civil service have been elaborately prepared and are apparently quite complete.

The city manager is required to submit to the council an annual budget not later than one month before the end of the fiscal year. The budget must con-

tain itemized statements of the appropriations recommended, together with other data. Provision is made for the auditing of the accounts of each officer upon his death, resignation, renewal or expiration of his term. The municipality is empowered to acquire any public utility franchise at a price to be fixed in the ordinance granting same. The municipality is also authorized to prescribe the form of accounts to be kept by public utility corporations, also to examine and audit the accounts or other records of such public utility. Copies of the model charter may be secured from the National Municipal League, North American Building, Philadelphia, on the payment of fifty cents.

A HANDBOOK FOR CITY OFFICIALS.

The secretaries' office is now preparing a handbook for the benefit of fifth and sixth class cities which it is proposed to distribute free to the officials of those cities belonging to the league. The book will contain the charters of fifth and sixth class cities, and extracts from the constitution relating to municipal corporations; also important data relative to the organization, annexation, and consolidation of municipal corporations and exclusion of territory therefrom. It will also contain data relative to the duties of city clerks, illustrated with engravings showing the proper forms for keeping records and accounts of that office; also contain excerpts from the codes in reference to the various municipal offices, including that of recorder. Special care will be taken in the indexing and cross-indexing of the work. The book will be out in about five weeks.

A NEW BOOK ON CITY PLANNING BY CHARLES M'LFORD ROBINSON.

This work has just come off the press of G. P. Putnam Sons, New York and London. It is a revised issue by this well-known author of the work originally published under the title of "The Width and Arrangement of Streets." The work contains 344 pages and is profusely illustrated. Special attention has

been devoted to the planning of streets and lots. The author's views have been influenced by a recent European trip and attendance at an International Town Planning Conference in London where the general thesis of the volume was subjected to international criticism. The book, as an exponent of the cause of a more rational method of

street planning has a definite mission. It is designed for the more efficient phase of city planning, to help in a practical way the real estate planner, city engineer and the landscape architect. A synopsis of the recent city planning legislation in the United States is incorporated in the work. The book is a valuable contribution to the subject.

RICHMOND'S MILK ORDINANCE

Richmond, Cal., April 28, 1916.

Wm. J. Locke,

Editor Pacific Municipalities.

Pacific Bldg., San Francisco, Cal.

Dear Mr. Locke:

In the April number of Pacific Municipalities, I was very much pleased to read a criticism by Mr. H. F. Gray, of Palo Alto, Cal., of Richmond's Pasteurized Milk Ordinance that went into effect on April 1 of this year.

In regard to the first criticism referring to the bacterial count, the standard required by the new State law seems to me to be rigid enough, and if all milk examined reached that standard, we will certainly have no grounds for complaint.

Regarding the second criticism, wherein we are criticised for requiring all milk to be pasteurized, whether tuberculin tested or not, since getting up this ordinance, I see that B. H. Rawl, chief of the dairy division of the Federal Bureau of Animal Industry of the United States, comes out strong for compulsory pasteurization of all milk and dairy products.

Mr. Gray says that an adequate dairy inspection will be able to handle any possible outbreak of typhoid fever, and that is true, but it is like locking the stable door after the horse is gone; what is the use of trying to get control of an outbreak, which we all know can be accomplished by a great deal of field and laboratory work, as was ex-

perienced here in Richmond from our recent typhoid fever outbreak, if you can prevent absolutely such an outbreak by pasteurizing the milk, as was demonstrated by Berkeley using the same milk from the same duly inspected dairy that we were, but all the milk sold in Berkeley from this dairy had been pasteurized, while ours had not been, with the result that we had over twenty cases of typhoid fever with two deaths, while Berkeley did not have a single case. This proved to us, absolutely, the value of pasteurized milk.

Pasteurization does not mean that the dairies will not be under inspection just as they are now, as the new law requires that all dairies from which pasteurized milk is derived must score at least sixty on the score card adopted by the United States Bureau of Animal Industry.

We believe that pasteurization, even if not properly performed, as required by law, which is only a matter of detail, for with a little practice, all dairies will pasteurize their milk properly, we will have additional safety, and not as Mr. Gray says, "pasteurization gives a sense of security without actual safety," for every minute and every degree of heat that is used towards perfect pasteurization make the milk just that much safer until the perfect pasteurization is performed as required by law—and we have absolutely safe milk.

Respectfully yours,

CHAS. R. BLAKE, M. D.,

Commissioner of Health.

Building Construction as Affecting Fire Risks

From a lecture delivered by C. F. Wieland, Consulting Engineer, San Francisco, to the associate members of the Fire Underwriters' Association of the Pacific in San Francisco.

It is a lamentable fact that there has not been established by any State in the Union a gold standard for building construction—a practically national law, requiring only local revision as to fire limit lines and modifications in minor respects, such as snow loads where only sunshine prevails. There is no logical reason why there is such a lack of agreement in the building codes of cities as today in force, or why small towns have not the protection of a building code that is national in scope. Probably some engineers or architects, having out-of-town practice, have been tempted with the advice that they need not design with the factor of safety obligatory in their immediate city, as there is no building code operative where the contemplated improvement is to be erected.

An important wall, having a settlement crack therein, is not a good protection to its adjacent structural members nor to the contents of the building. It is true that a crack in a brick or concrete wall may be skillfully grouted with cement but it is only an attempted healing of the effect. The cause should be found and corrected in the best possible manner. It may be said, without fear of contradiction, that its original strength can never economically be restored to a fractured structural member. It does not follow that structural defects may be present elsewhere in the building, but an agent, seeing an apparent weakness due to the foundation work, may direct his examination more searchingly to the other features of the building.

Where the water line is close to the surface of the ground the foundation work, if of reinforced concrete, should be of greater density and richness than required on dry sub-base, in protection of the reinforcing metal; if of brick, cement mortar should be used.

There has been use, heretofore, of red-wood as so-called mud-sill or planking under brick walls. It may not be universally believed that wood should not

form the underlying support of a brick or stone wall; but examinations to locate causes of distresses in buildings have laid bare the unfitnes of wood in the function mentioned.

In some buildings that were examined for fire loss adjustment it was seen that posts were out of plumb and without suitable footings; girders over posts were of two pieces laid flat instead of solid section or at least in two pieces placed vertically; and that floor joists were not doubled under important partitions nor headers doubled at openings. These construction details are readily viewed by an agent and their detection will enable him to look for the results.

Where girders are composed of two pieces laid flat-wise they will generally sag under their load—their strength is only that of the shallow depth or thickness of each piece. For instance: If a terra cotta pipe extends through an upper partition wall borne by weak girders, it may be fractured in the course of time and allow the escape of heated gases into the building.

Important bearing members of wood ought not to have large or loose knots. Where they occur and a fire finds its way to them the weak section is soon burned or charred through. In a series of weak roof trusses that were replaced by others of greater strength there were instances of large loose knots in the bottom chord. The sag that had taken place had opened wide the bottom chord member where the wood should have been the strongest. A small fire at that point would have precipitated the entire section of the roof towards the floor and placed a strain on the adjacent trusses. See figure 1.

The new trusses, supported by posts instead of studding, in order to obtain proper depth of top and bottom chords, are seen in figure 2.

When a wooden structural member is carefully designed due consideration is given to the fact that safe loads in-

dictated for posts, girders or joists, are for units of full size, that is a beam is assumed to be say 1-inch by 12-inch. Commercial sizes may not be full dimensioned. The "sizing" of studding and joists reduces the section and its bearing capacity.

The factor of safety of timber is generally taken at 6. That is: If a beam will give way or break down under the

inch has about 14 per cent less strength than a beam 2-inch by 12-inch.

Take advantage of the opportunity, whenever you can, of examining work that is being reconstructed. You may see with what care the original work was done and, of course, how the new work is being erected.

In one of the bay cities the partition walls between three store-rooms were

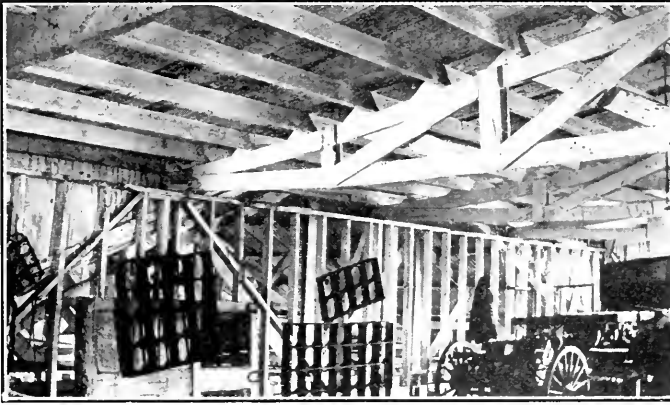


Figure 1.

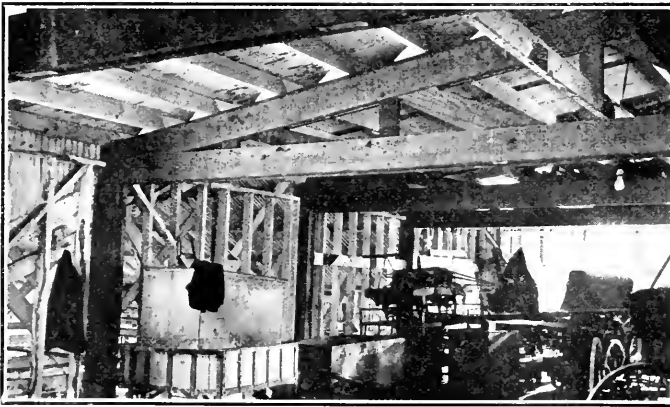


Figure 2.

strain of a load of 7200 lbs., it is considered safe for a load of 1-6 of that or 1200 lbs. It is therefore important that stock of the grade made the basis for the drawings of the specifications be used in the building and that defective lumber be rejected. Further: A girder that is intended to support a heavy load should be of the size mentioned on the drawings. A beam $1\frac{3}{4}$ -inch by $11\frac{3}{4}$ -

removed to make one large store. In the place of the partitions 8-inch by 8-inch wood posts were made to support a girder that was built up of six 2-inch by 14-inch planks or beams. Now undoubtedly the designer showed that the girder was to be either a solid 12-inch by 14-inch timber or that it might be built of 2-inch planks spiked together so securely that they would not fall apart when the load came on them. The car-

penters used six 2-inch planks, but instead of having them break joint alternately over the columns, where the joints could be fully supported, and so make a continuous girder the full

many as five joints were seen. This mongrel girder is today covered with lath and plaster and nothing more will be heard of it unless a fire takes place in that building.

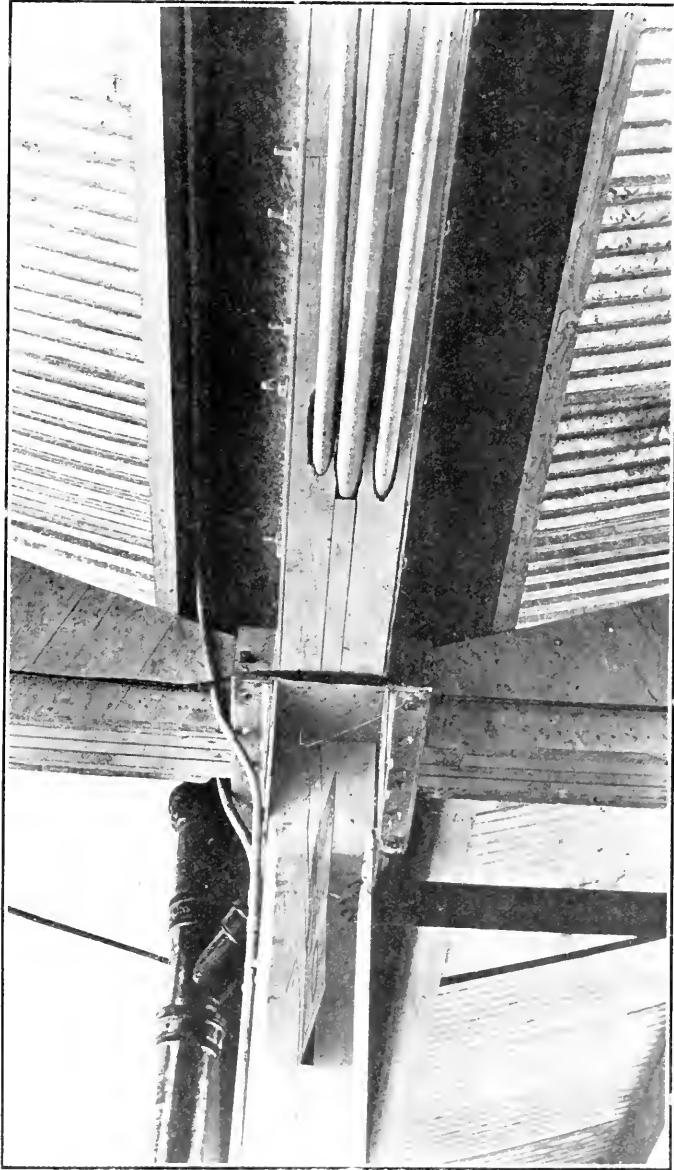


Figure 3.

length of the store, they put them together in a haphazard fashion and poorly relative to a cantilever. In one bay or space between two columns as

A cantilever beam must be designed and constructed in a skillful manner to be effective. Children have great fun in balancing one another—or rather in try-

ing to out-balance the other fellow—on a see-saw or teeter board, which is permissible on the playground. It is not well to carry it into building practice.

The wooden trusses and girders in the average garage are frequently instances of bad construction. In one the trusses were set on about 15-foot centers. In order to have more turning space for the automobiles some of the posts were left out to provide a clear distance of something like 30 feet. A trussed girder was designed of two 3-inch by 14-inch timbers, spaced 2 inches apart, and trussed with one 2-inch rod. However, the girder as in place has two timbers measuring $3\frac{3}{4}$ -inch by $13\frac{3}{4}$ -inch, spaced only $1\frac{3}{4}$ inches apart. The 2-inch rod was placed between them, but it was necessary to chisel out about one-quarter inch of the inner face surface of each timber at the ends so that the 2-inch rods could pass up towards the posts.

From an insurance standpoint there are now four thin sections of timber at the important shear points and bearing ends of a 30-foot wood girder, presenting a much easier task for fire to make way with than if the construction had been of the two solid beams properly spaced apart. See figures 3 and 4.

That the full benefit of the strength of the material entering into the make-up of a truss may be had, the foot of the truss should be so built that the top piece or chord—as well as the bottom piece or chord—rests over the wall or post and that it be of reasonable depth over the support. It is not unusual to find that the foot of the top chord rests on the bottom chord quite a distance away from the side of the wall or the post. When that is the case there is a bending strain on the bottom chord. That was one of the causes of weakness in the truss shown in figure 4, the top

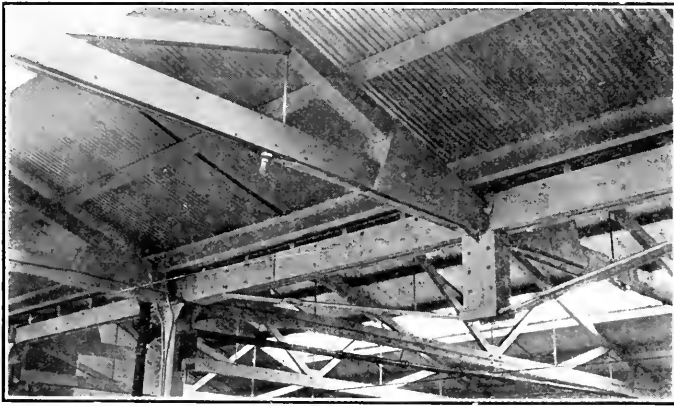


Figure 4.

Apparently it was thought that the 2-inch rod was not strong enough of itself to hold the load, in combination with the timbers, and accordingly two $1\frac{1}{2}$ -inch rods were gotten out to help along. The $1\frac{1}{2}$ -inch rods flanked the 2-inch rod. They could not go between the timbers, therefore borings were made through them. The result is that over 53 per cent of the useful section of the timbers was cut away and wasted. To overcome that two 12-inch by $\frac{3}{8}$ -inch by 6-foot steel plates are used as reinforcing. There is ample strength and to spare from a structural standpoint.

chord of 2-inch by 6-inch having been sawn to a feather edge on the bottom chord and over a 2-inch by 4-inch single cap piece. See also figure 5, showing the wall ends of trusses in a skating rink.

The bottom member or chord of a truss has a natural tendency to sag and is therefore in tension. If the bottom chord is composed of more than one unbroken length of timber the inclination, therefore, is to pull it apart at the splices. Here is a point that may be the weakest in the entire truss and one that is nearest the fire zone. An elabo-

rate design must be made that would result in a splice as strong as an uncut timber.

Some of the unseen construction features in the ordinary dwelling should be corrected by insistence and influence. A very common cause of fires is the domestic hearthstone, around which many appealing tales have been woven by inspired writers. When the day arrives that the hearth will glow only for that human sense called the heart, the millenium will have dawned. Now it is prone to be an area upon or through

inch single flue patent chimney was found to be serving two wood stoves, one located on the first floor and the other on the second floor.

Water stains being in evidence on the attractive woodwork of the stairway in the house being examined, curiosity was aroused to trace the leak. A beginning was made by taking down the boards and battens with which the stairway was cased in. A pocket or dead closet was laid open and in that there was found a patent chimney resting on a 2-inch redwood plank over the doorway.



Figure 5.

which a fire is kindled that travels heavenward physically instead of mentally.

The not uncommon method of constructing a hearth is to spring a wooden arched form on wood joists or supports and to be rather indifferent to the distance which the supporting wood members are away from the chimney. There should be no wood left under the brick arch, neither the form nor any supports near the chimney. In fact the hearth base may be constructed of reinforced concrete supported on a shelf of the chimney and hung on the other sides, to be of generous width and in length to the extreme ends of the chimney breast.

All chimneys should extend to the ground free of the building, and it may not be amiss to insist that the injunction should apply with equal force to so-called patent chimneys.

There is a case in point where a 7-

The chimney base was without a clean-out. The lowest length was a T section that extended into a room on the opposite of the partition. Reaching into the main flue through the T it was found that the wood distillations and carbon had accumulated to a level with the T. There being no cap to the chimney, rain had free access to the flue, dissolved the deposits therein and soaked and stained the woodwork below.

A few lengths above the first T the chimney was carried at an angle up through a closet in the second floor. There another T was directed into a room on that floor. The carpenter had sawed holes to clear the sheet metal casing of the terra cotta flue but had missed a true center by over an inch. By accident or design the T inlet was broken off at the main flue and the broken sleeve used as a collar to encircle the stove pipe as it passed into the main flue.

This patent chimney case is mentioned in such detail for the purpose of showing that defects in construction that are hazardous to fire can be searched out and corrected, without great trouble, as a consequence of a local agent's alertness.

After a recent fire in another house, an examination showed that a brick chimney was supported at an elevation of about 5 feet from the floor, on wood plank resting see-saw fashion on the vertical boards of a single curtain partition of 1-inch boards. The supporting plank was braced against both sides of the partition by knees or braces of wood. The fire charred the boards elsewhere in the partition but fortunately did not weaken those immediately under the chimney.

The house last mentioned had defects in other respects and was insured for an amount that exceeded its sound value by at least 50 per cent. Less than one-half hour's inspection at time application was made for insurance would have shown its undesirability as a fire risk.

Elimination of fire hazards will cause a natural reduction in the cost of insurance; but until fires are fewer in number every householder that is insured will have to bear indirectly a share of his neighbors' losses.

The garage is ever increasing in number and requires careful inspection before acceptance as a risk. Administration along safe lines may make the wooden garage a better risk than one of fireproof material, but it would be unsafe to place absolute dependence upon the wisdom of employes and customers. Daily inspection, on the part of the proprietors of a garage, of wash rack and traps; portable gasoline tanks; oil tanks; supply and suction lines connected with gasoline storage tanks; gasoline tanks of cars in storage and of work benches—over and under them—in the machine repair shops, should be carried out un-faillingly.

The recent destruction of a garage that was located on a prominent corner in a nearby city was due to a chain of circumstances. It involved bad judgment in the location of a wash rack; in the location of an automatic pump to the storage tank; on the part of a customer

who dropped a match which he had used to light a cigarette with; in the position occupied by the portable chemical engine with which the garage was supplied to fight fires; and most important of all, in the failure of the garage owner to see that his orders were instantly obeyed.

The wash rack was directly alongside and in front of one of the doorways used for the passage of automobiles. The gasoline storage tank pump was at the edge of the doorway and any drippings from it could eventually find their way into the sand trap serving the wash rack. The owner had noticed that the pipe fittings in the line leading to the gasoline storage tank were not tight and that gasoline was dripping therefrom each time any of the portable gasoline tanks were being filled. He instructed one of the employes to make proper repair but failed to stand by and see that the repair was made.

The wasting gasoline was ignited by the customer's match; an employe who had just filled a tank splattered more gasoline around with the storage tank hose line in his excitement; and because the chemical engine was stationed right alongside the place where the portable gasoline tank was being filled it could not be run out for service. The fire spread in less time than any account of it could be written in.

There should be no gasoline supply near a wash rack and no automobile nor motorcycle tank should be filled with gasoline while it is over the rack. Motorcycle tanks should not be filled while near supply tank or gasoline pumps. Spilled gasoline has more than once been ignited by hot exhausts. The one who feels free to drop a match or lighted cigar on the floor of a wash rack, forgetting that water is not the only liquid that looks wet, may some day awake to say "I never thought of that." Wash racks should be away from customers' line of travel through the garage.

It is questionable whether concrete floors in garages are free of guilt in the possible generation of fires. The ideal concrete is that made of hard rock of such density as to approximate the results of the works of Nature. Soft rock

is not a sparking element and is not used in concrete, but danger does lie in the hard rocks that should be employed as a concrete aggregate. Not a few automobile tires are re-shod with leather casings having steel shod treads. Anti-skid chains are spark producers when conditions are favorable, even though they are in use mainly on rainy or snowy days. The dropping of a hammer or other piece of metal or the sudden application of brakes on an automobile in motion, whose tires have steel shod treads or chains thereon, may cause the generation of a spark that will, conditions of temperature, and the air and gasoline vapor proportions being favorable, start a conflagration. See Technical paper 115, of the U. S. Bureau of Mines, on "Inflammability of Mixtures of Gasoline Vapor and Air" by Burrell and Boyd, also 127, "Hazards in Handling Gasoline," by G. A. Burrell—latter received as this paper is going to press.

A top finish to a concrete base or floor slab, made of other material than cement and rock or gravel, say for instance of asphaltic composition, may not be undesirable from the underwriter's standpoint. Certainly an asphaltic top finish would seal over the shrinkage cracks that are in the very thin concrete floor slabs seen in some garages having more than one story, and would allow the use of the water on the floors above without the annoyance of having it drip through the cracks onto the cars below. Where drip pans are not placed under cars carried on thin concrete floors it has been evident that oil drippings also find their way through the shrinkage cracks.

If an asphaltic top finish is properly mixed and laid there should be no likelihood of it softening up under the drip of lubricating oils.

The number of private garages made a part of or under the first floors of residences and apartment houses is rapidly increasing. There does not seem to be the consideration of the hazard they present. Public garages have more machines to care for, it is true, and yet the proprietors may be more alert to fire danger than are the householders.

Gasoline is used in the household for the cleaning of gloves and the like and

the automobile tank is often called upon for a quart to use in that way and for cleaning up around the car also. The result is that gasoline is drawn off in an open vessel for a time long enough for the vapor to go on a visit.

Automatically controlled gas fuel water heaters have pilot light constantly burning, and when hot water is needed a large volume of gas is released for ignition by the automatic control. Residences and apartment houses that have automobiles and automatic heaters in the same room or enclosure—and they have been so found—cannot be classed as safe, from the underwriter's viewpoint.

There is an instance of lack of mortar to be seen in a brick business building that is now being reconstructed in this city. The original first floor system was at a higher elevation than the sidewalk and has been replaced by floor framing located at the normal elevation. The bearing of some of the original first floor joists on the easterly wall was on a course of brick placed edgewise, instead of the normal "flat" way. It is reasonable to suppose that the brick mason needed only about 4 inches to bring the bearing course up to the proper elevation to receive the floor joists. It is doubtless agreed that the better practice is always to lay a bearing course on the flat and not on edge. Some of the brick, exposed in the removal of the plaster and of 4 inches of the thickness of the brickwork, betray the lack of an application of mortar to the entire surface of the brick. See figure 6.

A house safe to live in can never be constructed of bricks without mortar. There should be no vacant, porous or unfilled spaces in mortar joints. There should be a uniform coating of mortar on every course of brick and into that the succeeding course should be well bedded and its vertical joints absolutely filled. In the brick building last mentioned some of the vertical joints lacked mortar, the brick not being buttered.

Brick is porous and unless properly bedded and jointed so that every inch of adjacent surfaces is coated with mortar the inner walls will be water soaked by heavy rains or deluge of water during the fire fighting.

Concrete is formed of sand, gravel, rock, broken brick or slag, and held together by cement as the "glue." The sand and the cement make up the mortar with which to coat the particles of other aggregate. It is just as necessary to fill every bit of the space within the forms with solidly packed concrete, in order to get a strong, sound, non-porous or non-spongy wall or pier, as it is to have a brick wall laid up with solidly "packed" mortar joints. Stones without mortar are of no more value than bricks without mortar. Heat, fire, smoke and water are unceasing in their quest for weak places and should have no encouragement by man in careless workmanship.

To continue concrete work the next

steel wire coated with thin plaster. Wood and concrete members, likewise brick piers or walls, should have an addition of their own materials over and above that section which must do duty in bearing up the loads of the building.

If it were a requirement in building ordinances that the wooden members in the basement and furnace room of frame buildings and especially in basement garages, must be of such increased section or size as to assure slow instead of quick burning of studding, joists, caps and posts, the burden on the owner would not be very great. The additional wood, although inflammable, would be, paradoxically, in the nature of fireproofing.

Attention should be directed to the

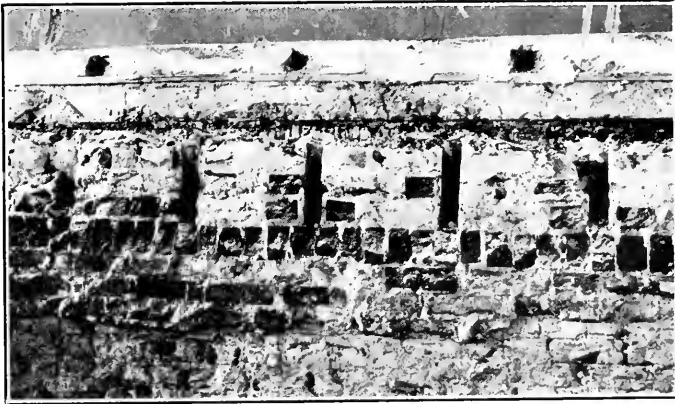


Figure 6.

day calls for a thorough preparation of the top surface left by the previous day's work, in exactly the same manner that the brick-mason starts in. The top surface last made should be scraped of any loose mortar, float cement or foreign substance, well wetted, then floated with a cement mortar—not concrete—and finally the concrete bedded into the layer of mortar. Unless successive layers of plain unreinforced concrete are borne by a steel lintel or beam they will not hold together in a fire any better than will brick.

Important structural members, be they of wood, steel or reinforced concrete, and brick piers should be fireproofed. Steel must be fireproofed—not merely surrounded with a cage of

exposures of buildings that may seem otherwise attractive as fire risks. The brick building shown in the left of figure 7 is operated as a hotel. It is separated from the nearest building by an alley or passageway of about 4 feet. The rear of the near-by buildings had wooden porches and stairways. A grass or waste paper fire started one noon day and made its way into the buildings by the trail of the wooden platforms, posts, stairs and porches. The hotel windows were not protected by metal sash and wire glass. The sheet glass was cracked by the heat. The salvation of the hotel lay in the fortunate fact that the fire occurred at noon day and had been only a short time in progress before being discovered. At it was it did a great



Figure 7.

deal of damage to the woodwork and had entered the business houses and the flats above them.

This paper could be made of greater length by the citation of other instances of personal observation and professional practice. It has by no means covered the whole of building construction as affecting fire risks; that is a story not capable of being written in the present day. It may, however, direct one's

thought to the little things that may be seen during the daily service of any active servant—which we all are. One may in a courteous manner point out to a prospective customer the element in his building that should be corrected, if possible, or that he should guard against in future buildings. Then, too, in case of loss an adjustment can be made on an equitable basis. "Service" has its rewards in well doing.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED
BY THE ACT OF CONGRESS OF AUGUST 24, 1912,**

Of Pacific Municipalities, published monthly at San Francisco, California, for April 1, 1916.
State of California.

City and County of San Francisco.

ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Wm. J. Locke, who, having been duly sworn according to law, deposes and says that he is the Editor of the Pacific Municipalities and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, A. Carlisle & Co., 251 Bush St., San Francisco.

Editors, H. A. Mason and Wm. J. Locke, 962 Pacific Building, San Francisco

Managing Editor, Wm. J. Locke, 962 Pacific Building, San Francisco.

Business Manager, W. A. Douglass, 962 Pacific Building, San Francisco.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

H. A. Mason and Wm. J. Locke, 962 Pacific Building, San Francisco.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

WM. J. LOCKE.

Sworn to and subscribed before me this 23rd day of March, 1916.

(Seal.)

HENRY B. LESTER, Notary Public.

(My commission expires February 1st, 1918.)

PUBLIC HEALTH AND THE SOMERS SYSTEM

From the Proceedings of the Second Annual Convention of the League of Texas Municipalities.

The Public Safety Committee offered no report. Mayor Roy Miller of Corpus Christi, a member of the committee, made the following remarks on the subject of public health:

Mr. Miller: I believe that it is the foremost duty, as it should be the foremost purpose, of the municipal government, to do everything in its power to protect and to improve the health conditions of the community. I do not believe there is one single problem to which the city government can give its attention, which will result in more good to the people whom it serves, than an honest effort to at all times improve the health conditions of the city. The present administration of the city of Corpus Christi—I believe. I may say with pardonable pride—has made remarkable improvements along that line. We have established an up-to-date, efficient health department. We have a city health officer, to whom we pay a salary of \$100 a month—a pretty fair salary for a small town. We have two sanitary inspectors, who are constantly inspecting the premises of everybody in town. We have a city garbage collection system, using from three to four wagons, as the needs of the situation may require. We have a model covered-garbage-can ordinance, which is strictly enforced and requires the people to put their garbage in model covered cans. Otherwise the city will not collect the garbage, and the owner is likely to find himself in the corporation court unless he complies with the law. We have also secured the co-operation of our local medical men in the strict enforcement of all quarantine regulations and all laws of the State sanitary code with respect to contagious diseases, and the monthly reports of our city health officer show some remarkable progress along that line. We have a large tourist population that comes in during the summer from all over the State. Consequently we have been subject to such contagion as is carried by transient people, and we have in times past had a great deal of

trouble with those diseases—scarlet fever now and then, and considerable diphtheria and throat troubles, and some smallpox, but the reports of our city physicians for this year, compared with the same months last year, show a remarkable improvement in health conditions. It shows fewer deaths, by anywhere from 25 to 50 per cent. Also—I do not suppose the health department is responsible for that—it shows a better birth rate. It shows a remarkable decrease in deaths from contagious diseases. For example, during the month of October we had no contagious diseases as compared with eight or ten during the same month last year. During the month of September we had one case of contagious disease this year as against sixteen or eighteen for the same time last year. Our general health conditions have improved remarkably, by reason of the strict enforcement of health regulations, and I believe that is a matter that the cities of Texas should give foremost attention.

The President: You have recently installed the Somers system down your way. How are your people pleased with it?

Mr. Miller: I believe they are going to be very much pleased with it. I have been taking some lessons in that matter for the past several years, from my friend here, Mr. Pastoriza of Houston, and I found myself quite an advocate of the system under his tutelage before I knew anything about it, as a matter of fact. We installed the system last March or April, I believe, and our first assessment was made under that system just during the past few months. It resulted in two things. It resulted in increasing for the most part the assessments upon business property, and in somewhat of a reduction upon the assessments in residence property. It resulted also in an increase in our total assessed valuation of from \$7,450,000 to about \$9,350,000, an increase of nearly \$2,000,000, upon the basis of taking 70 per cent of the land value and 50 per cent of the improvements.

VALLEJO MUNICIPAL WATER SYSTEM SPLENDID INVESTMENT.

*Reports Show City Has Received Gross
Profit of Nearly Half Million Dollars
From Plant in the Last Twenty-two
Years—Consumers Enjoy
Lower Rates.*

The city of Vallejo made a splendid investment when it acquired the municipal water system, as is shown by the fact that during the twenty-two years the water system has been in operation it has earned for the municipality a gross profit of almost half a million dollars, the profit from 1893 to June 30, 1915, being \$494,096.08.

RATE MUCH LOWER.

And aside from the money the water system has earned for the municipality, consumers have enjoyed a much lower water rate than when the Chabot Water Company was furnishing the fresh water consumed in Vallejo.

An audit recently completed covered a period of twenty-two years, from the beginning of operations in 1893 to June 30, 1915, and is as complete as could be made from the records on file at the City Hall.

ASSETS ARE \$827,784.69.

The assets of the water system are shown to be \$827,784.69, the fixed capital installed being \$814,823.25, and the amount expended on the system being as follows: Water works first cost in 1893, \$277,612.64; to enlarge pipe system in 1902, \$145,402.51; to enlarge pipe system in 1905, \$109,800.33; improvements in 1907, \$9,120.21; reservoir No. 2, Wild Horse Valley, built in 1908, cost \$82,221.04; Fleming Hill reservoir and new water mains in 1911, \$71,691.67; additions, 1893 to December 31, 1912 (out of revenues), \$107,733.71. Total,

prior to January 1, 1913, \$803,583.11. Additions since December 31, 1912 (out of revenues), \$1,240.14. The accounts receivable are \$7,431.17.

SURPLUS \$494,096.08.

The income account of the water system from the beginning of operations in 1893 to June 30, 1915, is as follows: Operating revenues, 1893, to June 30, 1915, \$1,032,563.04; less operating expenses, \$277,785.13; net operating revenues, \$754,777.91; add non-operating revenues (rent of land), \$1,177.50. Gross income, \$755,955.41; deduct interest accrued on funded debt, \$268,395.72; less amortization of premium on debt, \$6,536.39, leaving \$261,859.33. Profit, 1893, to June 30, 1915, carried to surplus, \$494,096.08.

RATES REDUCED 50 PER CENT.

As water rates were reduced 50 per cent when the municipal system commenced operations, it is evident consumers have saved an immense sum of money during the twenty-two years the city of Vallejo has been furnishing its inhabitants with water.

The figures also show that the system has paid for itself several times over, all things considered.

THE CITIES AND THE BABIES

(State Board of Health of Kansas)

Your city can protect the babies by—

Providing parks for mothers and babies.

Keeping the streets clean and dustless.

Making it impossible to sell bad milk or adulterated foods.

Providing pure water.

Proper disposal of sewage and garbage.

Proper inspection of the ventilation and sanitation of homes, factories and public buildings.

Establishing child hygiene stations where mothers can get accurate information as to the care of their children.

What is it doing now?

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda received bids April 25 for improving portion of Central Avenue by paving, constructing curbs, gutters and culverts.

Alameda Board of Education received bids May 2 for furnishing supplies, furniture, equipment, printing, etc.

Anderson will hold a \$60,000 bond election May 27 to build a new school.

Bakersfield has passed resolution of intention to grade, tamp and roll streets in District known as "Street District No. 27." Two schools will shortly be built at cost of \$20,000 and \$23,000.

Berkeley Board of Education received bids May 2 for four pianos. \$2500 has been appropriated for construction of sewer in Hearst Avenue. Bids were received April 28 for grading, curbing and macadamizing portion of Gilman street. On April 25 bids were received for furnishing and installing playground apparatus.

Chino has voted bonds for sewer system and for street improvements.

Cloverdale received bids April 15 for a lot of steel pipe.

Daly City has passed resolution of intention for the improvement of several streets by constructing sewers therein.

Eagle Rock received bids April 24 for improving portion of Viola Drive by grading and constructing curbs, sidewalks and gutters.

Fort Bragg Union High School Trustees received bids April 22 for construction of addition to the high school.

Fresno received bids May 1 for one motor-driven two-wheel automatic turntable aerial hook and ladder truck.

Hermosa Beach has passed resolution for the improvement of Eighth Street by paving and constructing curbs, gutters and sidewalks.

Hillsborough received bids May 2 for grading, surfacing and otherwise improving portion of Pump House Road. Hillsborough District School received bids May 2 for erection of a school building.

Inglewood will vote on a special tax levy for the maintenance of parks, music and for advertising.

Los Banos has passed resolution of intention for the paving of five more streets with asphalt concrete.

Manhattan Beach received bids April 19 for a lot of street work.

Maricopa high school district received bids April 19 for building a school.

Modesto school district received bids May 9 for \$200,000 school district bonds. Business

men are contemplating building of a public bath house within the near future.

Montesano, Ore., will receive bids shortly for construction of road bridge across Hump-tulips River.

Mountain View received bids May 3 for construction of cement sidewalks on several streets.

Napa has just submitted a report of its financial transactions for the fiscal year ending March 6, 1916. The report shows that the total current disbursements for the fiscal year are \$1,987.55 less than the budget appropriation for the period, and the actual receipts are \$3,054.27 more than the budget estimate of revenue available, making a total saving of \$5,041.82 over the estimated cost for the fiscal period. Napa recently adopted a modern city charter.

Napa has passed resolution of intention for improvement of Seymour Street by grading and paving; also construction of cement sidewalks.

Newman received bids April 11 for furnishing a 38-inch Fire Alarm Bell.

Oakdale high school will have a gymnasium.

Oakland Park Board will be given \$35,000 to spend on park purchases for several years if plans adopted by Park Board and city council are put into effect.

Petaluma has great expectations of getting \$60,000 post office.

Pomona. County Supervisors intend to improve Brea Canyon Road by paving.

Portland received bids April 17 for one street flusher, and 10,000 barrels of road oil. On May 8 bids will be received for 850 five-eighths inch water meters. On April 24 bids were received for one ¾-ton truck; also for complete Edison storage battery lighting sets. Bids will be received on May 22 for one tractor and one combination chemical engine. On April 20 bids were received for furnishing one set of fire insurance block books.

Red Bluff has voted \$15,000 for school buildings.

Redwood City received bids May 1 for construction of artificial stone curbs on portion of El Camino Real.

Richmond has passed resolution of intention for construction of sewers, manholes, lampholes and wyes in several streets.

Ripon will receive bids May 3 for paving Main Street.

Riverside has passed resolution of intention for improving portion of Fairmont Boulevard, Second, Third, Fourth, Fifth, Sixth, Seventh and Eighth streets and Whit-

tier Place by macadamizing, curbing, guttering, sidewalking and construction of catch basins and drains.

Sacramento has passed resolution of intention for a lot of sewers. Bids will be received shortly for construction of Sacramento weir. Bids were received April 27 for improvement of portion of Orange Avenue by paving, curbing and guttering. \$5,000 will be spent enlarging poultry building at State Fair grounds.

Salinas has passed resolution of intention for grading and paving portion of North Main Street and Gabilan Street; also for the improvement of portion of Front Street. New hydrants will be purchased.

San Leandro received bids April 17 for doing the city printing.

San Luis Obispo received bids May 4 for construction of 108 foot, Pratt riveted truss steel bridge over the Arroyo Grande Creek.

Santa Ana will shortly call a bond election to vote \$20,000 for furnishing street department with equipment for doing work and to build bridge across Santiago Creek. Bids were received May 1 for installing underground fire alarm system.

Santa Barbara Water Commissioners received bids May 3 for furnishing two automobiles equipped with light express bodies.

Santa Monica has passed an ordinance providing for the improvement of Grand Avenue by paving, constructing curbs, gutters and sewers.

Sawtelle will hold a \$10,000 bond election shortly to vote bonds for new fire house, fire engine and fighting apparatus.

Sebastopol has plans and specifications out for improving its water works by raising its reinforced concrete reservoir 10 feet and 6 inches. The estimated cost is something under \$3,000, which cost has already been provided for from the accrued profits of the water system for the past two years. The water rates are 50c minimum and 20c per thousand gallons. At this rate the profits last year were \$1800.00. Sebastopol has a population of 1500.

South San Francisco is agitating construction of new school.

St. Helena received bids May 2 for construction of sanitary sewer in portion of Madrona Avenue.

Stockton received bids May 5 for paving a number of streets.

Taft received bids May 5 for construction of a \$60,000 high school. An extension may be built on Sixth Street as the city's funds are in excellent shape.

Three Forks, Montana received bids April 12 for installation of water system.

Tropico received bids April 18 for street paving.

Tulare received bids May 4 for grading and paving.

Turlock received bids April 18 for centrifugal pump and electric motor for water works. Bids were received May 2 for construction of sewer system.

Whittier received bids April 10 for appliances and materials for improvement of portion of Lemon Street.

Willits received bids April 24 for construction of a number of cement sidewalks.

Winters received bids April 15 for erection of city hall building.

Yreka received bids April 6 for 400 feet of 4-inch standard screw joint galvanized pipe.

CALIFORNIA COUNTIES.

Alameda County receives bids May 22 for construction of a concrete and steel underpass under the tracks of the Southern Pacific Railroad on County Road No. 819.

Butte County received bids April 27 for road work on the Biggs and Princeton Road.

Contra Costa County has instructed County Surveyor to draw plans for improvement of portion of county road near Brentwood.

Humboldt County received bids April 11 for clearing and opening portion of county road along south side of Mattole River in Road District No. 1.

Kern County received bids April 27 for erection and completion of a concrete school building. Bids were received April 19 for construction of high school at Maricopa. Supervisors have pledged themselves to spend \$200,000 for construction of part of the highway to connect Bakersfield with Mt. Whitney.

Lake County is preparing a bond issue for good roads.

Marin County received bids May 3 for repairing, reconstructing and regrading portion of county road leading from Marshalls to Tomales; also for construction of culverts, paving and rip-rap thereon.

Mendocino County received bids May 5 for constructing four concrete culverts in First Supervisorial District.

Merced County has been holding mass meetings regarding bond issue to improve 100 miles of road.

Monterey County received bids April 21 for grading and macadamizing Monterey-Carmel road. Plans are being discussed for scenic road from San Luis Obispo to Monterey.

Napa County received bids April 11 for building new road in Capell from Berryessa road down valley to Galbreath's.

Orange County will hold a \$150,000 bond election May 3 to construct roads and bridges. Bids were received May 3 for improvement of part of Route No. 1.

Riverside County contemplates the calling of a bond election to vote \$713,425 for road work, including damage done by storms. Three important bridges will be repaired.

Santa Barbara County received bids May 1 for construction of reinforced concrete girder bridge across Zaca Creek.

Shasta County is planning to bond southern part of county for \$150,000 for good roads. County will join with Tehama County in building bridge to span the Cottonwood Creek.

Sonoma County. There is a rumor that highway will be constructed from Shellville to Santa Rosa.

Stanislaus County will receive bids May 9 for construction of reinforced concrete bridge over the Tuolumne River near Mo-

desto. Bids will be received on same date for construction of a jail building at Patterson.

Ventura County received bids May 6 for construction of the piers and abutments of the La Crosse and Casitas Bridges. Unfinished portions of the State highway from Springfield to Montalvo will be finished right away at cost of about \$60,000. Bids were received April 7 for construction of steel bridge across Sespe Creek near Fillmore.

Yuba County and Nevada County may build bridge jointly across county line.

Weeds? Why, It's Easy to Kill Them With the Atlas "A" Method

This can be Obtained by Using

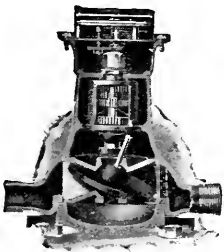
"ATLAS A. WEED KILLER" Which Destroys all Existing Vegetation—Seeds and Roots.
No Danger from Grass Fires after Application.

Atlas Preservative Company of America, Inc.

RIALTO BUILDING

Write Us For Literature

SAN FRANCISCO, CAL.



TRIDENT DISC

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small

**Over 128,000 Made and Sold
in 1915**

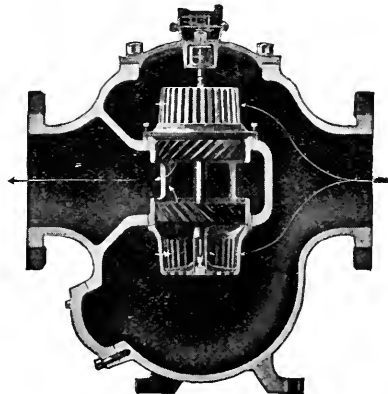
A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Franchises**, granting electric railroad company permission to construct spur tracks. Upland, 146.
- License tax** (amending). Coalinga, 147.
- Water**, regulating sale of. Lemoore, 148.
- Vehicles** (amending). Anaheim, 149.
- Salary of city treasurer**, fixing. Compton, 151.
- Water rates** (amending). Sierra Madre, 150.
- Fire department**, establishing of. Berkeley, 152.
- Grades**, establishing of. Coeur d'Alene, 153.
- Law library**, establishing of. San Mateo, 154.
- Fiscal year**, establishing of. Coronado, 155.
- License tax**, amusement places. St. Helena, 156.
- Rubbish**, preventing dumping on public highways. Fresno, 157.
- Precinct**, establishing (amending). San Mateo County, 158.
- Cesspools and refuse containers**, regulating the keeping of. Fresno, 159.
- Fire district**, creating. Newport, 160.
- Pound**, the establishing and maintaining of. Riverside County, 161.
- Parks**, the acquisition of land for. Calexico, 162.
- Oil**, regulating the storage of. Oroville, 163.
- Bicycles**, regulating the use of. Albany, 164.
- Dogs**, muzzling of. Riverside, 165.
- Election, special**, bond. Yreka, 166.
- Avenue**, permitting use of. Inglewood, 167.
- License tax**, for selling of gasoline, kerosene, etc. Suisun, 168.
- Bonds**, redemption of. Winters, 169.
- Loads**, regulating carrying of. Winters, 170.
- Intoxicating liquors**, regulating. Sierra County, 171.
- Franchise**, constructing of pipes. Orange County, 172.
- Awnings and signs**. Los Gatos, 173.
- Bonds for water-works**. Covina, 174.
- Stables and garbage**, providing the care of. Red Bluff, 175.
- Traffic**, governing of. Burlingame, 176.
- Traffic**, prohibiting the obstruction of. Anaheim, 177.
- Gasoline and explosives**, regulating keeping of. Nevada County, 178.
- Milk**, providing for the inspection and sale of. Bakersfield, 179.
- Grades**, establishing of. Hermosa, 180.
- Vehicles**, regulating of. San Joaquin, 181.
- Election**, excluding territory. National City, 182.
- Curb-lines**, establishing of. Fairfield, 183.
- Streets**, closing of. Albany, 184.
- Cigarettes, cigars and tobacco**, prohibiting use of by minors. Coeur d'Alene, 185.

- Bonds** for street work. Chino, 186.
- Licenses**, regulating of. Coeur d'Alene, 187.
- Election**, special, for bonds. Santa Monica, 188.
- Grades**, establishing of. Selma, 190.
- Licenses** for occupations. Santa Monica, 191.
- Streets**, improving of. Santa Monica, 192.
- Liquor license** (amending). Coalinga, 193.
- Salary of city officials** (amending). King City, 194.
- Salary of city officials**, fixing of. Newman, 195.
- Appropriating money** for building purposes. Berkeley, 196.
- Buildings**, moving of. Napa, 197.
- Cremating**, prohibiting of. Stockton, 198.
- Concealed weapons**, prohibiting carrying of. Santa Ana, 199.
- Bonds**, issuance of. Fairfield, 200.
- Franchise** for transmitting sounds, signals, etc. Santa Barbara, 201.
- Street improving**, regulating. Reedley, 202.
- Buildings**, regulating construction of. Hoquiam, 203.
- Roadways and sidewalks**, regulating the digging and disturbing. Redondo Beach, 207.
- Election for bonds**. Dinuba, 104.
- Street improving**. Hoquiam, 205.
- Buildings**, regulating construction of. Hoquiam, 206.
- Fire arms**, prohibiting the discharge of. San Bruno, 208.
- Removal reports**. San Bruno, 209.
- Stables, yards and barnyards**, regulating keeping of. Corcoran, 210.
- Appropriating money** for sewer. Berkeley, 211.
- Bonds** for municipal improvements. Santa Maria, 212.
- Water**, using of. Grass Valley, 213.
- Licenses** required by traveling merchants, hawkers, peddlers, vendors, etc. Modesto, 214.
- Removal reports**, requiring of. 215.
- Sidewalks, curbs and gutters**, regulating of. Sacramento, 216.
- Fireworks**, regulating sale, possession, storage, manufacture of. Sacramento, 217.
- Brush, grass, leaves, shavings, garbage**, regulating and permitting within certain hours the burning of. Sacramento, 218.
- Election** for new charter. Sacramento, 219.
- Foodstuffs**, prohibiting adulteration of. Sacramento, 230.
- Money** for street improvements. Modesto, 221.
- Street work**, accepting of. San Mateo, 222.
- Storage tank, pumping station, mains, conduits and pipes**, granting permission to construct for conducting salt water. Alameda, 223.
- Caterpillars**, declaring nuisance of. Mill Valley, 224.
- Salt water**, selling to private party by city. Alameda, 225.
- Motor buses**, licensing and regulating. Portland, 226.
- Business licenses** for revenue, regulating. Etha, 227.
- Stagnant pools**, declaring nuisance. San Anselmo, 228.
- Flume pipe**, agreement with Spring Valley. San Bruno, 229.

PLATE GIRDER BRIDGES FOR SALE

Three plate girder bridges, aggregating 1020 ft. in length, consisting of 56 plate girders 30 ft. long and 3 ft. deep; 40 plate girders 60 ft. long and 5 ft. deep, and steel supporting towers. Fabricated by Milliken Brothers, Staten Island, under Robert W. Hunt & Co's. inspection for mill and shop. Bridges were not erected; steel is new and in excellent condition, stored near Santa Fe tracks, San Diego, Calif. Plans and specifications may be obtained upon application to Purchasing Department, San Diego Electric Railway Co., San Diego, Calif.

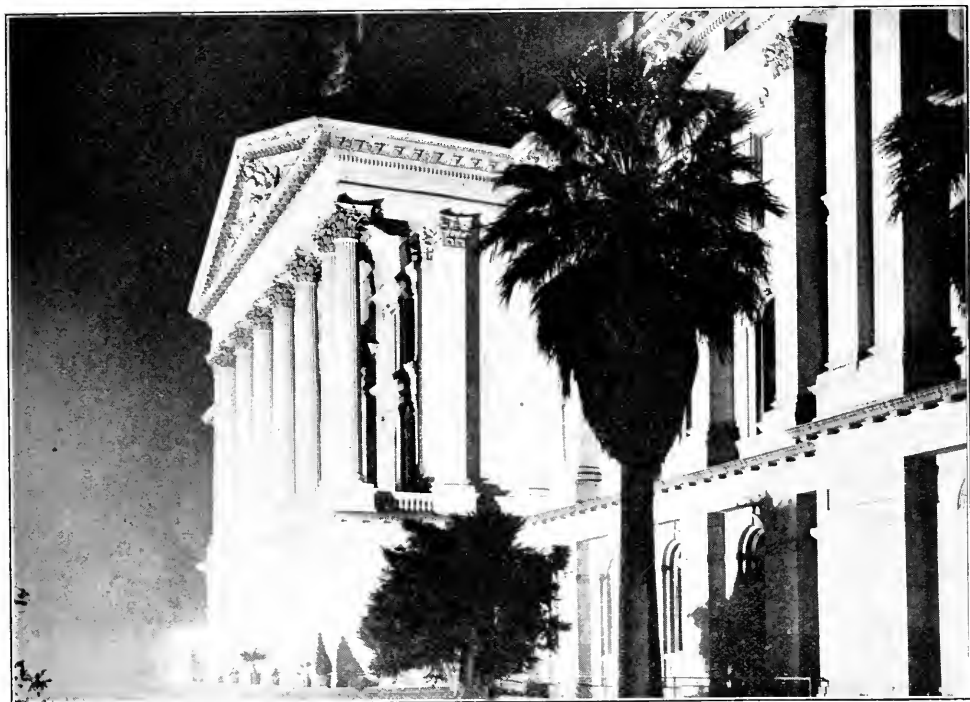


Vacation Trips

Reduced Round Trip Fares
TO
Mountain and Seaside Resorts

Monterey Bay Points
Lake Tahoe
Sierra Resorts
Yosemite
Lake County Resorts
Shasta Resorts
Klamath Lake Region
Crater Lake
Los Angeles and Its Beaches
San Diego and Its Exposition

For Fares, Sale Dates, Train Service, Etc.
Ask Southern Pacific Agent



Illumination of State Capitol, Sacramento, Cal., with Ornamental Luminous Arc Lamps.

ORNAMENTAL LUMINOUS ARC LAMPS MAKE THE "CITY BEAUTIFUL"

One of the first aids towards bettering conditions in a city and making it attractive is good light in the streets.

The Ornamental Luminous Arc Lamp does both. The brilliant, soft, white light from these lamps besides illuminating the sidewalks and streets, lights up the adjacent buildings, as shown in the above illustration, so that the architecture is brought out and locations of business offices are not wholly lost when evening falls.

Further, the appearance of the streets by day is made attractive by these handsome and attractive lighting units.

Hundreds of progressive cities have installed these Ornamental Luminous Arc Lamps which are fast becoming the accepted system of ornamental street lighting.

Get together with your board of trade and make *your* city not only attractive to the residents but also to out-of-town people.

Write our nearest office for Bulletin 4955 which describes the system in detail.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
724 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.



Mention "Pacific Municipalities" when writing for catalogs.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

Neptune Meter Co., S. F. & L. A.

National Meter Co., 141 New Montgomery St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

The American City

published at 87 Nassau Street, New York (Chicago office, 327 South La Salle St., San Francisco office at 320 Market Street,) has just published its annual

MUNICIPAL BUYERS' GUIDE FOR 1916

This guide is a book of 156 pages containing classified lists and information in regard to the products of over three hundred advertisers in THE AMERICAN CITY, representing leading manufacturers of road building and paving materials and machinery, water works supplies and equipment, street lighting, drinking fountains, trash and garbage cans, fire department apparatus and supplies, trees and shrubbery, as well as mechanical equipment for park and cemetery use, etc. Names are also included of many leading consulting engineers and landscape architects available for municipal improvement undertakings.

The price of this Buyers' Guide is 50 cents, but any official having to do with purchases of machinery or supplies may secure a copy free of charge by making request for same to our nearest office.

The American City

87 NASSAU STREET
New York City

320 MARKET STREET
San Francisco, Cal.

327 SOUTH LA SALLE ST.
Chicago, Ill.

In addition to sending the Municipal Buyers' Guide free of charge, we shall also be glad to send you a copy of THE AMERICAN CITY (in case you are not already a reader of it) together with an attractive combination subscription offer which we are making in connection with "Pacific Municipalities".

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.



Pure Iron For Permanence

The excellence of the old-time
pure irons has been equalled in

ARMCO American Ingot Iron

This is the purest, most even and most carefully manufactured iron on the market and therefore the most durable in exposed situations.

CALIFORNIA CORRUGATED CULVERT COMPANY

Armco Iron Culverts, Gates and Syphons,
Flumes, Troughs and Well Curbing.

411 Leroy
St.
Los
Angeles



400 Parker
St.
West
Berkeley

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes

WE MAKE THE

CROWN

EMPIRE

NASH

GEM

EMPIRE COMPOUND

PREMIER METERS

Write for
Catalogue

TYPE K NASH METER

The

SIMPLEST

DISC METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS: WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

A New Charter for Alameda.....	207
Editorial—	
Budget Making	219
The New Dairy Inspection Law.....	219
As to City Managers.....	220
Assessments by Appraisal	220
Form of City Assessment Roll.....H. A. Bewley	221
Collection of Assessments under the Improvement Bond Act of 1915H. A. Bewley	223
Civic Co-operation in Chicago.....	224
British Municipal and National Ideals.....R. V. Harris	227
The Value of Pasteurization	233
From the Proceedings of the League of Nova Scotia Municipalities.....	234
Child Welfare, Municipal Responsibility and Opportunity..... Mary Ritchie	234
Business Management for Cities.....	236
What Our Pacific Coast Cities Are Doing.....	237
Titles of New Ordinances Received.....	241

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

NEW FORMS

To comply with 1915 Amendments to 1911 Act

An Entire Change of Forms and Records under this Act

If you are operating under the 1911 Act and Amendments, you will need the new forms as there have been many important changes.

WE CAN SUPPLY THE CORRECT BLANKS

You will need new sheets for your Street Superintendent's record, as all forms have been changed.

Our Publication the "Improvement Act of 1911" as revised by W. J. Locke is now ready for delivery. This booklet contains very valuable information and you will find it indispensable.

A. CARLISLE & CO.

SPECIALISTS IN MUNICIPAL SUPPLIES

251-259 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

A Growth Based on Sheer Merit

No Guess Work

Nothing But Quality

BITULITHIC pavement has grown from 16,400 square yards in 1901 to the extent of over 39,000,000 square yards in over 400 cities, which is equivalent to over 2200 miles of roadway 30 feet wide between curbs.

If **BITULITHIC** is once adopted for your streets, you will always insist on it. Additional large contracts are constantly being awarded by the cities that have used it for many years.

Bitulithic Means Quality



Marlboro Street, Boston, Mass. Finished Bitulithic surface laid over old macadam from Dartmouth Street, looking toward Clarendon Street. Completed June, 1914.

If your streets are paved with **BITULITHIC** the attractiveness of your city to visitors as a place of residence will be increased and indirectly result in a growth of population.

Automobilists constantly traveling over the **BITULITHIC** streets carry its praise everywhere.

Is not the experience of over 400 cities enough to satisfy you that **BITULITHIC** is the "Best by Every Test"?

"We could build cheaper, but we won't;
We would build better, but we can't."

Do not wait until a mistake is made—pave your streets with **BITULITHIC** and avoid mistakes.

BITULITHIC appeals alike to city officials, property owners and automobile drivers.

BITULITHIC is a sanitary, dustless, non-skidding pavement, and affords a secure foothold for horses.

Write today for illustrated booklets and learn more about this modern, ideal street pavement for modern cities.

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
Portland, Ore.
Richmond, Va.
Winnipeg, Man.

Chicago, Ill.
Phoenix, Ariz.
Utica, N. Y.
Vancouver, B. C.

Rochester, N. Y.
Nashville, Tenn.
Montreal, P. Q.

Los Angeles, Cal.
St. Louis, Mo.
Toronto, Ont.

LEAGUE OF CALIFORNIA M U N I C I P A L I T I E S

ORGANIZED 1897

— OFFICERS —

President	- - - - (City Clerk of San Diego)	- - -	ALLEN H. WRIGHT
First Vice-President	- - - - (City Attorney of Napa)	- - -	WALLACE RUTHERFORD
Second Vice-President	- - - - (Pres. Board of Public Works of Los Angeles)	- - -	LORIN A. HANDLEY
Secretary	- H. A. MASON	Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 6

EDITORS

- - - H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

JUNE, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

A NEW CHARTER FOR ALAMEDA

In the spring of 1913, the people of Alameda were called upon to announce their views at the ballot box on the proposition of a new city charter. The election resulted in 2462 votes being cast in favor of the proposition as against 1647 in opposition to it.

For one reason and another further action in the matter was postponed until the early part of the present year, when the call was issued by the city council for the election of a board of freeholders. In the mean time a Bureau of Municipal Reference and Education had been established by the council, and about the time it was decided to call for a freeholders election, the council imposed on this bureau the important duty of preparing and recommending a model form of charter for submission to the freeholders when elected.

The members of the bureau realized at once that the value of any work which they might do in connection with the matter would depend largely on the character of the freeholders, wherefore

they decided that the first thing to be done was to take some measures to secure the election of competent men to serve on the board. Accordingly they appealed to the president of the chamber of commerce and suggested that he call a joint meeting of all the civic bodies and improvement clubs in the city and urge them to take some action on the proposition. The idea was heartily endorsed and resulted finally in the formation of an organization under the name of the Charter League, from which a committee of nine well-known citizens was appointed by the president to submit nominations for freeholders.

Acting on the assumption that their report would in all probability be approved by the general body, the nominating committee determined to exercise the greatest care in the selection of candidates. It was agreed by the committee at the outset that each of the nine members should submit the names of ten suitable persons from which selection might be made, and thereafter in choos-

ing from the names submitted the members of the committee acted on the theory that the most important thing was to secure broad-minded men of judicial temperament, carefully avoiding those who might have an ax to grind or a hobby to ride. Not one of the persons finally selected was an aspirant for the position; as a matter of fact, in many cases it took considerable persuasion and an appeal to civic duty to induce them to accept the nomination. However, the method used by the committee resulted in securing a class of men who otherwise would not have consented to run for the position under any circumstances. The report of the nominating committee was unanimously adopted by the Charter League and the entire ticket was subsequently elected; in fact, there were no opposing candidates nominated, a very pleasing tribute to the committee's work and very gratifying to the league.

After their election, the freeholders met and organized by choosing Hon. Frank Otis, former mayor and assemblyman as chairman, and Brainard C. Brown, secretary. On Wednesday evening, June 9, the board met to receive suggestions, the principal one coming from the Bureau of Municipal Reference and reading as follows:

To the Honorable, the Board of Freeholders of the City of Alameda.

Gentlemen:

The undersigned, members of the Bureau of Municipal Reference of said city, in compliance with the provisions of a resolution of the city council, herewith respectfully submit the following ideas and suggestions pertaining to a suitable charter for the City of Alameda:

TYPES OF CHARTERS.

THE FEDERAL PLAN.

At the present time it may be said that there are three types of charters which have been adopted by cities in the United States. The oldest and most commonly used is that known as the Federal type of charter. It receives its name from the fact that it is based on the plan of our Federal government by providing the three independent departments (the executive, legislative and judicial) with the numerous checks and balances involved, dividing the city into

wards or districts, investing the executive with the veto power and, in many cases, even adopting the bicameral legislative system.

Its use by American cities is due to two primary facts:—First, the splendid success of our Federal government and second, the fact that until recently municipal charters were made by State legislatures instead of boards of freeholders as in California; beside, it was only natural that the cities should adopt that type of government which had worked so successfully for the State and nation. Be that as it may, the Federal system proved to be a miserable failure when applied to the government of cities, the failure becoming more pronounced as the cities grew in population. Details are unnecessary: the graft, corruption and general inefficiency which have prevailed under the system are matters of history. Moreover, it was found that the complex scheme of checks and balances which the system involves, instead of safeguarding the public interests, actually served as a cloak to cover up fraud and extravagance.

The present charter of the City of Alameda is a modification of the Federal type, and though only a single legislative body is provided, it has the ward system, provides for a mayor with the veto power and retains the three fundamental divisions of government aforementioned. Under the Federal plan the legislative body varies from nine members, as in the case of Alameda to 195 in Newport Beach, R. I., a city of 30,000 people.

The vote taken by the City of Alameda in April, 1913, with 2462 affirmative votes as against 1647 negative, may be considered as an indication that this type of municipal government is no longer satisfactory.

THE COMMISSION PLAN.

The Commission Plan of Government (so-called) had its origin in Galveston, Texas, following the great flood which partially destroyed that city in 1900. During the sixteen years since that time, some 465 cities in the United States, varying in population from 2000 to 300,000 (Jersey City, N. J.), have adopted it. The Commission Plan is generally conceded to be an improve-

ment on the Federal Plan. For example, it fixes responsibility with more certainty, as the men elected (in most cases five) serve in the double capacity of councilmen and administrative officers. Under this plan the city government is generally divided into five departments, each member of the council becoming (ex-officio) a department head with full power to manage and control a particular branch of the city government.

The Commission plan has proved more satisfactory than the so-called Federal plan, and many cities in the United States have prospered under it. In a number of instances efforts have been made to go back to the old plan, resulting invariably in defeat; Denver, Colo., however, being a conspicuous exception.

A report made in July, 1914, by the Civic Government League of Edmonton, Canada, based upon information secured from editors, secretaries, presidents of boards of trade, chambers of commerce, city clerks, mayors and commissioners on the success of the plan in sixty-five cities, showed that it had met with considerable success and that none of them would care to go back to the old form.

It is a fact not generally known that the Commission form of government has been in existence for many years prior to 1900; for instance, in Washington, D. C., since 1873, which city is governed by a board of three men appointed by the President of the United States; Memphis, Tenn., since 1879; Sacramento, Cal., between 1863 and 1893, and New Orleans from 1870 to 1882, which last named city recently returned to the commission plan. However, the credit of popularizing this plan of government belongs to Galveston, Tex., and Des Moines, Iowa. The publicity given to Galveston after its disaster in 1900, emphasized the possibilities of the scheme and resulted in its being adopted by

many cities. Des Moines added the initiative, referendum and recall, which features have since been generally adopted by the other cities under this form of government.

However, the idea of investing elected officials with administrative functions was theoretically unsound, a theory which time and experience seem to uphold. The weakness is not only due to the inability to secure capable administrative officers by popular election, but also to the lack of co-operation among the commissioners themselves. While the Commission plan has proved more satisfactory than the old Federal plan, the leading authorities and students of municipal government have never been enthusiastic supporters of it.

An important factor, and one that will appeal very strongly to the people of Alameda, is the expense of this plan of government. This can best be shown perhaps by comparison, taking a city such as Berkeley, for example. Berkeley adopted the Commission form of government in 1909. Its population at that time was a little less than 40,000 and though somewhat larger than Alameda at the present time, it is suitable as a criterion. Berkeley pays its mayor \$2400 a year. Its four councilmen, as they are called, receive \$1800 a year. All the councilmen, as well as the mayor, have their own stenographers, whose salaries vary from \$60 to \$110 a month. The salaries of the city officials aggregate \$9600. Allowing an average of \$75 a month for each of the five stenographers, or a total of \$4500, we have a grand total of \$14,100. Alameda would probably be obliged to pay almost as large salaries as those paid in Berkeley were this plan adopted. In addition to this cost, it would probably be necessary to make expensive alterations in the City Hall in order to provide offices for

the five commissioners. Assuming for the sake of argument, that some of the stenographers could be dispensed with, a conservative estimate of the cost of this plan of government to Alameda would be not less than \$11,000 a year.

THE MANAGER PLAN.

The manager plan of municipal government is said to have originated in Lockport, N. Y. The first city manager charter was presented to the legislature of that State in 1911 by the Lockport Board of Trade, but it failed of passage. In 1912 a city manager charter similar to the Lockport plan was adopted by Sumpter, South Carolina, a city of 8100 population. Since then the plan has been adopted by some forty cities in the United States, the largest being Dayton, Ohio, which has a population of 117,000. The plan has been adopted by the following California cities: San Jose, population 35,000; Bakersfield, population 19,220; Alhambra, population 9000; San Rafael, population 6000; Glendale, population 7550; and San Diego, population 90,000. A city manager charter has been recently prepared by the City of Santa Barbara, population 15,000.

The manager plan is based on the theory that the administration of the business of the municipality and the execution of the policies of the city council should be under the supervision and control of one person, preferably called a manager. The arguments advanced in support of this plan are numerous. For example, it is claimed that the plan involves the absolute fixing of responsibility: in other words, that the entire responsibility of administering the affairs of the various branches of the city government rests upon the shoulders of a single official. In the so-called Federal plan, and also in the commission plan, responsibility is more or less divided, whereby delinquent officials are fre-

quently enabled to escape just criticism or blame, by simply resorting to that popular fabrication commonly known as "passing the buck." This cannot be done under the manager plan.

It is contended also that the manager plan of municipal government is very similar to the plan which has proved so successful in administering the business of industrial corporations, the people being likened to the stockholders and the city council to the board of directors, with the city manager occupying the position of superintendent of the works. Attempts have been made to differentiate between a business corporation and a municipal corporation on the ground that one is run for profit, whereas the other is not. This difference is more imaginary than real, however, as the object sought to be attained is alike in both cases, to-wit: to secure the maximum of benefit for the minimum of cost. The only difference in this respect lies in the fact that the profits are represented by dividends in one case and lower taxes in the other. Moreover, it is generally admitted that the administration of municipal government is purely a matter of business and should be dealt with according to business methods. Take for instance such things as the improvements of streets, management of the police, fire, light and water departments, leasing of factory sites and purchase of supplies: they are purely matters of business and nothing else. Wherefore it may be contended very properly that those methods which have been found so successful in conducting private business institutions may be adopted with a large degree of confidence for administering the business of a municipal corporation.

Among the other advantages to be gained by having a general superintendent or manager is the fact that in such

case the city employees might easily be shifted from one department to another if required. It frequently happens that one department will have a surplus of help for the time being, whereas another will be short-handed. With the various departments under different heads, a temporary transfer of employees from one department to another is impractical, whereas it becomes an easy matter under the manager plan.

The manager plan has been likened to the plan upon which the cities of Germany have been so successfully governed. It is the practice in that country to promote a successful manager from time to time to a larger city with a corresponding increase of salary, and this practice, it is gratifying to note, has already been adopted in the United States. Several cases are on record of the promotion of city managers in this country, among them being the following: Manager Ashburner promoted from Staunton, Va., to Springfield, Ohio; Henry W. Waite from Cincinnati to Dayton, Ohio; and in this state, F. J. Boland, from city engineer of Livermore and recently of Coalinga to Manager of San Rafael; and Chas. E. Hewes, engineer of Alhambra, to Manager of that city. There are indications that this practice will continue to grow, in which event the average city manager will be strongly induced to make a record for economy and efficiency in the hope of securing a bid for his services from a larger city. This situation furnishes another strong argument in favor of the manager plan.

One of the grounds upon which the plan is attacked is based on the charge that it is not democratic and for that reason is unsafe. We believe there is more sound than substance in this objection, for while it is true that the plan involves the concentration of consider-

able power in the hands of one person, it is also true that that person is a creature of the city council, and that he holds his office subject to the pleasure of the council. However, the people are absolutely safeguarded through their constitutional rights to the exercise of the initiative, referendum and recall. And after all, may it not be truthfully said that that government is most "democratic" which serves the people most satisfactorily?

The advantages of the manager plan are summed up in a majority report of a Committee of the National Municipal League, the majority members consisting of Chas. A. Beard, Professor of Municipal Government in Columbia University, Clinton Rogers Woodruff, Secretary of the National Municipal League, William Bennett Munro, Professor of Municipal Government in Harvard University, and Richard S. Childs, Secretary of the National Short Ballot Association. This report may be found in the May, 1914, number of *Pacific Municipalities*, on page 258.

As regards the expense of the manager plan of government the following facts will show that it is apparently much cheaper than the commission form. For illustration, most cities governed under the plan pay their councilmen five or ten dollars a meeting, limiting them, however, to four or five meetings a month. In cities of the size of Alameda, \$5.00 is the usual compensation. On that basis and with a limit of four meetings a month, this would involve an expense of \$100 a month or \$1200 a year. The salary of the manager would not exceed \$400 a month or \$4800 a year; this, added to the \$1200 allowed the councilmen, and the expense of a stenographer for the manager, would cost not to exceed \$7000 a year as against the con-

servative figure of \$11,000 if the commission form were adopted.

There are several variations of the manager plan. In some cases, for example, the manager is exclusively the administrative officer and has no connection whatever with the city council, whereas in others, such as provided in the San Jose charter, he sits with the council and fills the office of mayor. In some cases he appoints all the administrative officers, while in others, such as the clerk and city attorney, the appointments are made by the council.

However, after carefully weighing all arguments, we are of the opinion that the manager plan is the most logical plan devised up to the present time for the government of municipalities.

In advocating the adoption of this plan for Alameda, we are not unmindful of the fact that it would meet with more or less opposition, based principally on the charge that the plan is still in an experimental stage. Notwithstanding the fact that such a charge is unwarranted, in our opinion, for the numerous reasons hereinbefore mentioned, nevertheless we suggest the incorporation of a special provision in the charter which would enable the voters to change the plan, in case it should prove unsatisfactory, without the necessity of a charter amendment. As a precedent for such a provision, we respectfully call your attention to the new charter of Napa, which is based on the commission plan but contains a provision (Sec. 86 Napa Charter) which enables the voters by an initiative ordinance to adopt the manager plan. In our case, we suggest the adoption of the manager plan, with a provision in the charter which would enable the voters by an initiative ordinance to abandon it in case of dissatisfaction, in which event the duties provided for the manager should be performed by such subordinate officers as may be appointed by the council.

NAME AND BOUNDARIES.

Having disposed of the general plan of charter, we will now take up the question of boundaries. It has been the practice heretofore, in most cases, for charter framers to commence the instrument with an announcement of the name, followed by a most particular description of the boundaries of the city, frequently using up several pages of closely printed matter for this purpose. Our investigations have led us to believe that it is altogether unnecessary to describe the boundaries of the city in the proposed new charter, and that a brief statement that the boundaries will continue as they are at present will be sufficient. For illustration, we suggest a paragraph substantially as follows:

Section 1.—The City of Alameda shall continue to be a municipal corporation of the same name, and with the same boundaries as established at the time this charter becomes effective or as said boundaries may be changed thereafter in the manner authorized by law. (See new charter of Alhambra and proposed new charter of San Jose.)

POWERS.

It has been the general practice heretofore in framing city charters to specify and enumerate the various powers of a city with great particularity, but this is no longer deemed necessary or advisable. It is not advisable for the reason that the courts have held that when the powers are so expressed, the city is limited to the exercise of these powers alone and has no other powers. To set forth all the powers a city might wish to exercise is practically impossible, as no one can foretell the needs of the future. In view of the recent amendment to our State constitution, the leading authorities agree that a simple statement such as the following is all that is necessary:

Section 2.—The City of Alameda is expressly empowered to do and perform all acts and things appropriate to a municipal corporation and for the general welfare of its inhabitants, and which are not specifically forbidden by the Constitution of the State, or which now or

hereafter it would be competent for this charter specifically to enumerate; and no enumeration or specific statement herein of any particular powers shall be held to be exclusive or a limitation of the foregoing general grant of power.

THE CITY COUNCIL.

The members of the Bureau are strongly inclined to the opinion that the city council should consist of not more than five members. Experience shows that in a larger body there is greater likelihood of the members becoming divided into permanent factions and often sacrificing the interests of the public to the interests of their particular faction.

The alleged merits of a large city council are purely supposititious and theoretical; they have not been found in practice. On the contrary, experience shows that the larger the legislative body the more inclination there is to indulge in aimless debate and "play to the gallery." The new charters of Berkeley, Long Beach, Pasadena and Stockton, all of said cities being larger than Alameda, provide for a city council of five members. The most efficient legislative bodies are those whose members sit around a table and discuss the business of the city in a conversational tone without rising from their seats, such as is done by the board of directors of a private corporation. In this respect some of our smaller sixth class cities are among the best governed in the State.

It is true that in the cities of Germany, which are generally conceded to be shining examples of successful municipal government, the city council is comprised of a great many members; however, the powers of the council in a German city are purely of an advisory character. Regarding this feature of the proposed new charter we suggest for your consideration, the following:

Section 4. Except as otherwise herein provided the legislative power of the City of Alameda shall be vested in a city council consisting of five members. They shall be elected by the qualified electors of said city at a general municipal election to be held therein on the

second Monday in April in each odd numbered year. Members of the city council shall hold office for the period of four years from and after the Monday next succeeding the day of such election and until their successors are elected and qualified.

The respective terms of the members of the city council first elected hereunder shall be determined as follows:

The two persons elected by the highest number of votes shall hold office for four years and the three persons elected by the lowest number of votes shall hold office for two years. In the event of two or more persons being elected by the same number of votes those who have received the greatest number of first choice votes shall be deemed to be elected by the highest number of votes for the purpose of ascertaining their respective terms, or determining who is entitled to the office of Mayor.

THE WARD SYSTEM.

Practically all the authorities on municipal government agree that the ward system should be abolished, and it has been omitted from nearly every modern charter. Its advantages are purely imaginary, whereas its evils are most realistic. The ward system has the effect of creating antagonism between different parts of the city and preventing that unity which is absolutely essential to the accomplishment of great public achievements. It fosters pork-barrel politics as, under the system, each councilman feels it is his duty to secure as large an appropriation for his ward as every other councilman has secured, even though he may have no need of it. Furthermore, the ward system often prevents a city from securing the services of a good man on the council, simply because his ward is already represented. A city councilman should serve the whole city and not merely a part of the city. He cannot do this properly under the ward system.

RESIDENTIAL QUALIFICATION.

We believe that no residential qualification should be required as a prerequisite condition for holding any municipi-

pal office, elective or appointive. In nearly all the cities of the State (large and small) a period of previous residence is no longer required except of councilmen, in which case the period is invariably one year. However, we cannot see any advantage to be gained by imposing such a condition in any case. The length of time a person has lived in a city has nothing to do with his fitness to fill a public office.

There are those who will contend that some deference should be given to residents of long standing, but this is based on the theory that the principal purpose of a public office is to furnish a means of reward for political services to such people. The idea of securing an official who can render the best service to the public is only a secondary consideration.

However, it is generally presumed that the principal reason for imposing a residential qualification is on the theory that a person who has resided in the city a definite period of time is better acquainted with the city's needs and therefore capable of serving more intelligently. Be that as it may, it is a well-known fact that a newcomer is often much better able to see the needs and possibilities of a city than the old-time residents, for the reason that the "vision is usually obscured when the eyes are too close to the picture." The newcomer is able to make a comparison of conditions with those of the place from whence he came, and for this reason it might be said that he is better qualified.

Laying all other considerations aside, however, we believe the matter should be left entirely with the voters. It is not likely that a newcomer would be elected to office in any event, except under extraordinary circumstances, or unless he were a character of wide reputation, in which case his services might be most valuable. However, we take the position that if a majority of the people should ever want such a man, they should have the privilege of electing him.

VACANCIES.

In the case of vacancies arising through death, resignation, or otherwise, it is our opinion that the cheapest and most satisfactory way of filling them is

to have the appointment made by three members of the city council. If, however, within thirty days, no decision is arrived at, the appointment should be made by the members of the Civil Service Commission. This does away with the necessity of an election.

SALARY TO COUNCILMEN.

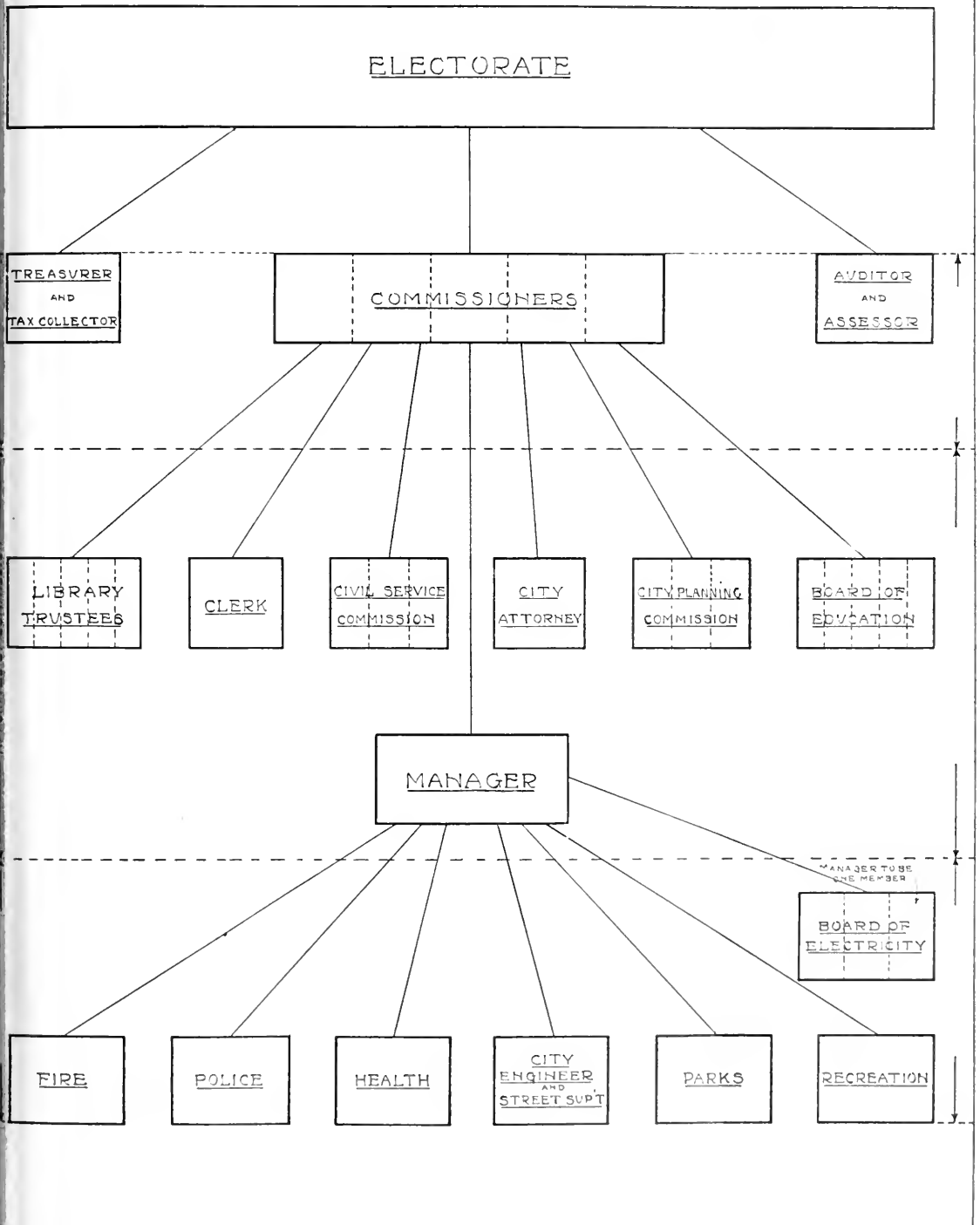
Nearly all modern charters provide for the payment of a small stipend to the councilmen for their services, it not being deemed fair to ask a man to give up his time without some slight monetary compensation. In our opinion \$5.00 a meeting, limited to four meetings a month, is ample; this to be paid only in case the member is present, however.

MAYOR AND PRESIDENT OF THE COUNCIL.

We are inclined to the opinion that the selection of the president of the council who, by the way, we believe should also be ex-officio mayor, should not be left to a vote of the council members but determined according to the highest vote received, for the reason that selection by the council would be liable to cause an embarrassing division of that body at the very outset of its career. This tendency has been demonstrated innumerable times. It is our opinion, therefore, that the individual who is elected to the council by the highest vote should, *ipso facto*, become the President of the Council and Ex-officio Mayor, to hold office two years. At the election two years following, should some new member be elected on the council by a higher vote than he received two years before, the new candidate should then become the Mayor and presiding officer; if, however, no candidate receives a higher vote, then the one who has acted as President and Mayor should continue to serve for another two years. We might add that in the cities of the fifth and sixth class, of which there are over two hundred in the State, it is customary to give the presidency of the board of trustees to the member who was elected on the board by the highest vote. It is done as a matter of courtesy. Would it not be wise to make it a matter of law?

It will be urged against this plan that the man receiving the highest vote may not necessarily be the most competent

CHART ILLUSTRATING CHARTER AS PROPOSED BY
MUNICIPAL REFERENCE BUREAU



one to preside, which may be quite true; nevertheless, it should be remembered that it does not require qualifications of a very high order to preside over a small city council, and furthermore, that the same objections might be raised against the policy of electing the Mayor directly by the people as we do now. Under the plan proposed, the people will vote with full knowledge of the fact that the councilman receiving the highest vote will be *ipso facto* Mayor and President of the council. There may be some question as to the comparative merits of this plan and the plan provided for in the new charter of San Jose, wherein the manager appointed by the council becomes ex-officio mayor, but we are inclined to favor the plan above suggested.

POWERS OF MAYOR.

The mayor should have no veto power. The veto is a relic of the old Federal plan and is not contained in any modern charter. It involves the assumption that the judgment of one man is better than the combined judgment of five men. Most of the modern charters vest the mayor with ministerial powers only. He is simply the executive head of the municipality, representing the city as such, by his signature to legal papers, and by his presence at ceremonial functions.

TIME OF MEETING.

The council should meet at least once a week in order to expedite the business of the city. Under the present arrangement, where two weeks, and sometimes three weeks, intervene, much valuable time is often lost, and the city business greatly delayed.

AUDITOR—AN EX-OFFICIO ASSESSOR.

The office of Auditor and ex-officio Assessor is satisfactory in our opinion, as provided in the present charter and we suggest no change except the making of a provision that the office be held absolutely independent of the council, and the employees of the Auditor be selected by him without the necessity of confirmation by the council. This gives him absolute independence, and fixes a definite responsibility upon him.

TREASURER AND TAX COLLECTOR.

What has been said of the Auditor and Assessor applies likewise to the Treasurer and Tax-Collector.

BOARD OF EDUCATION.

In this connection we suggest that the present charter provisions relating to the Board of Education and school system be retained in the new charter, subject, however, to such modifications or amendments as the present Board of Education may advise. Our suggestion in this matter is prompted by knowledge of the fact that the present management of our school system is apparently giving entire satisfaction.

PUBLIC LIBRARY.

For the government of the public library we recommend the incorporation of a provision in the charter adopting by reference the general State law enacted "for the establishment and maintenance of public libraries within municipalities," in 1901, and amended in 1905 and 1909. The general law is substantially the same as the present charter provisions except that as amended in 1909 the library trustees may pay their own bills by warrants signed by the president and secretary of the library board. We believe it is better to have the library managed entirely independently of the city council as it is done in other cities operating under the general law of the State.

CITY PLANNING COMMISSION.

We do not believe it will be necessary to make provision in the new charter for the maintenance of the city planning commission as the new State law is apparently sufficient. (See 1915 Statutes, page 708.)

CIVIL SERVICE COMMISSION.

We suggest that provision be made for the establishment and maintenance of a civil service commission, and advise that the provisions of the San Jose charter and the recommendations of the National Municipal League Committee on this subject be used as a guide in conjunction with the recommendations of the present Police and Fire Commissions.

DEPARTMENT OF HEALTH.

For this department we are inclined to recommend a provision somewhat similar to that embodied in the San Jose charter (see Sec. 98, etc.). We suggest,

however, that in regard to this matter the board may obtain valuable advice from the present Health officer who has taken an active interest in public health work for a number of years. We suggest also that the proposed provisions relating to this department be submitted to Dr. Wilbur A. Sawyer, Secretary of the State Board of Health, Sacramento, before final adoption. See *Pacific Municipalities* for November, 1915, page 551, and February, 1915, page 62.)

INITIATIVE AND REFERENDUM.

Provision for the exercise of direct legislation is fairly well covered by the general laws of the State (see 1915 Statutes, page 319), wherefore we are inclined to believe it may be entirely omitted from the charter. Should the board prefer to incorporate the procedure in the charter, we recommend the adoption of the referendum provisions contained in the new charter of Napa.

RECALL.

The general opinion prevails throughout the State and elsewhere that the provisions for exercising the recall should be made more stringent. Under our present State law a small minority may put a city to the expense of a special election regardless of the wishes of the majority. Another bad feature is the provision in regard to the election, which requires that the officer sought to be recalled shall receive a majority vote, whereas the candidates seeking his place only require a plurality.

We recommend for your favorable consideration the provision of the charter of Sacramento (see 1911 Statutes, Extra Sessions, pages 401 to 406). In that charter it is required that persons proposing to circulate a recall petition must first file with the clerk a Statement of Intention not exceeding 200 words in length, giving their reasons, which statement is thereupon served on the official attacked, who has five days in which to reply with a statement justifying his course. Both statements are then printed on the same petition. In case the recall election is ordered, a successor to the official cannot be elected at the same election, but the vacancy, should any occur,

is filled by the Commission like any other vacancy.

The members of the Bureau are almost tempted to advise the adoption of the recall provisions of the Napa charter, which absolutely forbids the circulation of petitions. They are required to be placed in the office of the city clerk for a period to receive signatures. However, in view of the great many commuters living in Alameda we realize that such a provision would make the recall practically prohibitory. Therefore, in lieu thereof, we recommend the adoption of provisions similar to those in the Sacramento charter, adding, however, a provision for enabling those opposed to the recall to sign their names in a parallel column on the same petition, and requiring the proponents of the recall to secure not only the specified percentage of signatures, but also more signatures than those favoring the retention of the official.

NOMINATIONS AND ELECTIONS.

Regarding the subject of nominations and elections, we cannot speak too highly of the system adopted by the new charter of Napa. The officials and leading citizens of that city have informed some of the members of the Bureau that the system of nominations enabled Napa to get a class of men to accept office which otherwise would have been impossible.

We also urge most earnestly the adoption of the Preferential System of Voting. This system was first introduced in the country in the new charter of Grand Junction, Colorado, the details of the system being drafted by Senator Bucklin of that State; it is regarded as the simplest method of preferential voting ever devised. Under this system the voter is enabled to indicate his first, second and third choice on the ballot and have them counted and credited accordingly. The system has been incorporated into many new charters and has been enthusiastically praised wherever tried. It was recently adopted by the City of Napa and later by Santa Monica, and elections have been held under the system in both of these cities. The system was lately incorporated into the proposed new charter of Santa Barbara. The largest city

on the Pacific Coast using the preferential method of voting is Portland, Oregon.

About two years ago the present State administration had a constitutional amendment submitted to the voters which would authorize the use of the preferential system of voting by cities governed under the general laws, but the amendment went down to defeat in an avalanche of other proposed constitutional amendments.

The system is superior in many respects to the so-called Berkeley system of election, in that it secures a more satisfactory result in one election than is obtained under the other systems in two elections. In urging the adoption of this system we recommend your favorable consideration of those provisions of the Napa charter substantially as therein contained.

PUBLICITY OF CANDIDATES AND PURITY OF ELECTIONS.

Under this heading the members of the Bureau most earnestly commend to your favorable consideration a proposition which, though new and novel, we believe will at once appeal to your intelligence and secure your enthusiastic approval. In brief, it is a provision for enabling the elector to learn something of the comparative merits of the respective candidates seeking his vote.

We feel quite safe in saying that in our opinion the omission of such a provision is one of the principal defects of our system of elections. The voter is presented with a ballot on election day containing the names of many persons, concerning most of whom he knows comparatively little, and yet we wonder at his lack of ability to vote intelligently.

In the days of party nominations, he felt that the party was in some measure responsible for its candidates and he was able to vote according to his party affiliation, but in this latter day of non-partisanship for municipal officers, he has no such means.

During the campaign preceding the election, he observes various kinds of signs, banners, cards and other advertising devices appealing for his vote in be-

half of the different candidates, but not one particle of information can he gather from the various advertising devices as to the relative qualifications of those who wish to serve him in public office.

The plan which we propose is one that will not only enable the voter to secure the information to which he is rightfully entitled, but also will restrict the candidates to those methods of advertising which will serve some purpose. Under the plan it is proposed that each candidate be required to answer certain questions in writing and give certain information, under oath, which is thereafter published and sent to the voter, and from which he may get some idea of the fitness of the candidate to fill the office sought. Furthermore, the plan also involves a limitation of the candidate's campaign expenses to the actual cost of publishing and otherwise properly disseminating the information.

The idea has been approved by a number of leading authorities on municipal government, but up to the present time has not been incorporated in any charter to our knowledge. A few years ago a joint committee on the proposed new charter for Alameda, composed of representatives from the various civic bodies and improvement clubs, unanimously adopted the idea in the form which was thereupon published in the June, 1914, number of *Pacific Municipalities* at pages 324-5-6, a copy of which is sent you herewith.

In concluding this report, we realize that there are a number of other matters of more or less importance regarding which we have made no recommendation, such as Franchises, Budget, Purchasing Agent, etc., and in case your honorable board should feel that we may be of further service in connection with these matters, you may rest assured that we are yours to command.

Respectfully submitted,

BUREAU OF MUNICIPAL REFERENCE AND EDUCATION, CITY OF ALAMEDA.

WM. J. LOCKE,
R. E. BOSSHARD,
JASPER W. MILLS.

∴ ∴ EDITORIAL ∴ ∴

BUDGET MAKING.

Nearly all of the cities of the State commence their fiscal years on July first. While this time is not the best that may be selected for this purpose, nevertheless it seems to be the general practice and as long as that is as it is the financial affairs of municipalities should be arranged in accordance therewith.

It is at the beginning of the fiscal year that the legislative bodies should give attention to the budget of expenditures for the ensuing twelve months. Very few cities give much attention to this important detail, and the consequence is that finances are managed in a sort of haphazard way and money is spent on projects that jeopardize the principles of safe finance and not infrequently the funds are found to be short before the fiscal year is concluded.

Again, budget making is frequently postponed until the last moment, with the result that the estimates are ill-considered and later in the year must be disregarded and the whole plan of appropriations thrown in the discard. This means practically no budget at all. It is useless to go through the form of budget-making if the subsequent purpose is to be ignored. True budget making should be a continuous performance and the data necessary in its formation should be accumulated and worked over during the preceding year. Some one in the city's employ should be delegated to perform this duty and it should be studiously performed.

It goes without saying, that the basis of all financial systems should be found in a modern system of accounting. And herewith a protest is made against the

use of the word "uniform." A single system needs not "uniformity," except in the classification of accounts which should conform to those used by other cities. The system should be "unified" so that the accounts of all departments may be properly correlated. The best practice in installing a new accounting system is to adopt the same or similar system that has been installed by some other cities and has stood the test of actual use. Several cities in this State have such systems, so city officials need not go far afield to get something that will be found adapted to its needs.

As suggested above, this is the time of the year when accounting systems should be installed or reformed and the work of wise budget-making commenced. It is hoped that the names of a few more cities will be added this year to the list of municipalities that are making financial progress.

H. A. M.

THE NEW DAIRY INSPECTION LAW.

The new dairy inspection law is to go into effect in October and the State health officials have announced their intention to see that its provisions are strictly enforced. This means that the cities and counties will be required to do their part in insisting on a compliance with the requirements of the new law. It means much to the health and well-being of the people of the State. Milk is a commodity that is a proficient carrier of disease and its production and distribution is such that inspection must be made at the source. The inhabitants of a town are usually supplied from the country outside and inspection can only be had through the co-operation of the

municipal and county authorities. The law provides for just such a system of co-operation and authorizes the appointment of a single inspector, who will act on behalf of the county and the various municipalities therein and to divide among or between them the burden of expense. In this way a duplication of labor is prevented, the expense is reduced and as a further result uniform methods of inspection will be adopted and confusion avoided. In justice to the dairy interests it is important that the system to be adopted should be worked out in advance of the taking effect of the law, so that the dairies will be found to be in good shape at the commencement of its enforcement.

H. A. M.

AS TO CITY MANAGERS.

Analysis of the so-called "city manager plan" as so far adopted in this country, will disclose that the "low down" of the whole scheme is, after all, but management by the council masquerading under the new name. Charters provide for the appointment of a "city manager" by the council, removable at its pleasure and subject to its direction. A manager appointed in this way, must, to hold his job, do the bidding of a majority of the council, and instead of being a manager he is only an agent. In many cases he will be the goat, and when anything goes wrong the council will "pass the buck" to him, with the result that he will get all of the unpopularity that there is in the community and the next council will discharge him with a taint to his name. This is a prediction as to the way the "city manager plan" is going to work out in many cases and the result will be a discredit of the name. It may not be news to state that a large number of cities in this State have ample authority to appoint city managers and may do so whenever they choose. That they have not done so is largely due to the desire to have some other town try out the scheme. Besides, there are very few persons qualified to perform the duties of the position. Unless the manager is

an all-around municipal expert his management will be in the amateur class. But then, this may be superior to the management that previously prevailed. But the weakness of amateur management is that it induces criticism and a fickle public will be apt to change managers pretty often.

Nevertheless, the city manager is in process of evolution and after awhile we may have professional managers who will not take the job except on a long time contract and be in position to resist the dictation of the council and defy the criticisms of the public. Then, when the people get used to the results of expert management, we will begin to get a measure of municipal efficiency. The educational process must be gone through with and this takes time. So just this warning: A city that has been inefficient for a long time, is not going to develop a very high degree of efficiency just by adopting on paper the city manager plan.

H. A. M.

ASSESSMENTS BY APPRAISAL.

Several cities in California are seriously attempting to correct the inequalities that exist in their assessment rolls. Most assessments are made by guess and not by appraisal. The assessor who is the real article will not countenance the practice of listing one man's property at eighty per cent of its value and another's at thirty per cent. So he institutes a system of appraisal and gets his values by this means. It is much more satisfactory and besides is more equitable to the tax payers. A great many cities take the county assessor's valuation or copy the county roll. This is the easiest form of guessing as to whether it is right or not. Los Angeles County has a system of appraisal. Can anybody say whether any other county has such a system?

Cities should endeavor to visualize their expenditures. Cut down the overhead charges and expend more for things that can be seen. Then there will not be so much kicking about high taxes.

H. A. M.

FORM OF CITY ASSESSMENT ROLL

BY H. A. BEWLEY, CITY CLERK OF SAN BRUNO.

The perfect assessment roll must have an index of owners in alphabetical order and also an index to the property by lots and blocks or other description.

The common form of roll is to arrange names of owners in alphabetical order, combining all property under each ownership in one assessment space and often in one assessment, thus making the roll self-indexing, as to owners. Index as to property is usually then had by means of a block book which completes the indexing if properly kept.

Where a large number of parcels of land are under one ownership and are scattered over an entire subdivision, this alphabetical form of roll will plainly reduce the amount of work by bringing these parcels all under one head. The assessment of a number of lots is often placed on one line in such rolls, and it is probably for these reasons that such form is used.

Including different parcels of land in one assessment is contrary to law and the alphabetical arrangement of the roll has many other disadvantages the principal of which is the possibility of errors. If in recording transfers an error is made so that a parcel of land is either omitted or entered twice the form of the roll will not expose such error, which could be detected only by a thorough check of the entire work.

The arrangement therefore should be by lots and blocks and the parcels of land listed from maps or from roll of the previous year if once properly listed. This insures the assessment of all property without any chance for omission or duplicate assessment, which is the primary concern of the assessor. Any error as to ownership will not affect the validity of the assessment.

Where assessments under the Improvement Bond Act of 1915 are to be included in the roll, the property should be listed in the same order as in the improvement assessment. The advantage of such arrangement when transferring improvement assessments to the roll, is plainly evident.

The main features therefore in outlining an assessment roll are as follows:

1. Establish a standard arrangement of listing all property in the assessment roll and in all improvement assessments. If different subdivisions, arrange alphabetically or in the order of location, follow all blocks and lots in proper order and any acreage separately.

2. Make up an alphabetical card index of owners for the entire city. All property wherever located, under one ownership to be listed on same card. Allow space on card for date of transfer from such ownership, such date to be noted as soon as transfer is recorded and card of new owner to be inserted at same time.

3. Place a column in the assessment roll headed "Transfer sheet number." The daily record of transfers (usually furnished by county abstract companies) to be numbered beginning with a new series on the first Tuesday in March of each year, and the number of the sheet showing record of transfer to be inserted in said column in assessment roll opposite the lot or parcel transferred as soon as recorded.

The correct ownership of all property is then available from the roll at all times. Of course the assessment once made is not changed for that year, but a number appears in the transfer sheet column, and the new owner's name is readily referred to. At the same time both past and present owners' names are in the card index as either may ask for the tax bill. The transfer date, however, has been noted on the past owner's card, and

when the roll is written up for the following year such card is taken out of the file, or if included with others not sold, the lot transferred is ruled off the card.

The roll with the index thus becomes a complete index to all ownerships of property correct to date at all times, the roll being itself indexed as to lots or parcels of land, and the card index as to owners alphabetically. This is of unestimated value in many ways even if a block book is kept, and will serve as a check on the block book. For the collection of improvement assessments, a list of ownerships is always at hand in the proper order, and the tax collector always has before him a notation of any transfer made since assessment. These results are procured with the least possible amount of work in this way. The system once started is easily kept up and there is no such thing as making any other sort of index to the roll as the index is perpetual. In making up a new assessment roll the ownerships are copied from last year's roll with reference to the transfer sheet for new ownerships wherever there have been such as indicated by the transfer sheet numbers in the roll.

The exact form of the roll will vary as to collection by one or two installments, description of property required and as to inclusion of assessments under the 1915 Improvement Bond Act, or other assessments.

Collection by one installment is a great saving and should be recommended wherever the assessments are not too large.

Typewriting the roll in loose leaf form, which is being largely adopted, saves much space and shortens the work. The ownerships and descriptions can be written thus, and the assessed valuations inserted later from field book or block book by the use of a wide carriage adding machine.

Also by using the loose leaf, different style headings can be placed in the description and address columns. That is, one page can be headed "Lot No.—Block No.," and another with the same ruling would read "Acres—Fraction."

On the pages for lots it would be intended to list one lot to each line, the owner's name and address on same line to the right in two wide spaces provided for that purpose. But on the acreage page we must have a space for description, so we change the heading to read "Name and Address" in the first column and "Description" in the second column, which is used for address on the page for lots which require no other description. Of course more than one line is required for each parcel requiring description, but the number of such is usually not so large. The pages are made much simpler and much space is saved in this way; and in the loose leaf the amount of each style can be inserted as needed. The book may be bound before equalization if desired.

Assessments under the Improvement Bond Act of 1915 should be transferred to the city assessment roll from a complete assessment that has been made for each bond issue covering the full period of such bond issue, and which complete assessment showing the amounts due each year should be made up as soon as bonds are issued. A column for both principal and interest for each such bond issue should be inserted in the city assessment roll so that the tax collector can give the amount of each such items singly from the roll; and also for the purpose of apportioning collections to the proper funds of principal and interest as provided in the Act.

If the property is arranged in the order outlined it is not likely that many of the improvement assessments will extend entirely through the roll, as such would cover the entire city. It would not be likely to have over five or six assessments against any one section, but there might be many more in the entire city. Therefore in these improvement assessment columns, a column can be used for one series of bonds in one section of the roll and for another series in another section. The page totals would then be recapitulated at the end instead of forwarding from page to page. The recapitulation will serve as an index to the pages which make up any certain assessment series.

The Collection of Assessments Under the Improvement Bond Act of 1915

BY H. A. BEWLEY, CITY CLERK OF SAN BRUNO.

In the collection of assessments under this plan there is one feature of distinct advantage to be gained over other methods of collection that may not have been as generally considered as other advantages up to the present time. This feature is the stabilizing effect upon city records.

Liens upon property for improvements are in most cases of much more consequence than those for general State, county and municipal taxes. For this reason there has been a general demand, especially by the searcher of records, to compel the recording of all liens for municipal improvements with the county recorder.

Certificates of title are required in all important transactions affected by realty; and anything that will be of assistance in their preparation will therefore be of general benefit.

There is no doubt that the Improvement Bond Act of 1915 will prove the most satisfactory manner of collection of improvement assessments. Should this prove to be true this Act could be made the standard form of collection of all assessments in the State, which would place all municipal assessments in the city assessment roll; and there would be but one short step further necessary to complete the county records: the filing of notice of all tax sales and succeeding redemptions by the city with the county recorder, which is no more than should be done at present. The county recorder in this way will have a record of all assessments due and unpaid, and the city assessment roll will be a further index to all assessments which are a lien as soon as one tax period is passed after the issue of bonds.

Of course, this plan can be adopted by any city without further legislation;

but the plan must be State-wide before it would become generally understood and equally effective.

The record of assessments in the city clerk's office under this plan should show the following information:

1. Total assessments in bond issue.
2. Total amount of any assessment and interest remaining unpaid at any date.
3. Record of all assessments paid in advance of entering on city assessment rolls as provided in the Act.

It would not be unusual for a city to have from 10 to 20 different improvement assessments in a few years with from 300 to 500 unpaid assessments to each. If it were necessary for the clerk each year to refer to the original lists of unpaid assessments and figure principal and interest due on each assessment, the amount of labor and chances for errors would be enormous, even if there were no payments in advance, and a record of such payments must be kept in any event.

The form shown herewith is designed with these points in view. The plan consists of making and listing the entire assessment with amounts of interest due for the total period if paid in the regular way, as soon as the bonds are issued. Each sheet is thus made up and balanced before any amounts have been collected and there is no chance for errors as the figures are proven both vertically and horizontally. Provision is made for advance payments as shown by ruling out all assessments thus paid with the extension of the total amount both of principal and interest paid and the date of payment.

On or about October 1st each year all items not paid in advance for the year shown are simply transferred to the city assessment roll, checked as shown, and

the total of such items for that year separated from those paid in advance for the purpose of checking the total of amounts transferred to the city assessment roll. These separate totals are shown at the bottom of the sheet in spaces provided, and as stated should be made for each year about October 1st.

The sheet here shown is as the same should appear after transfer to the city assessment roll for 1919. During the year 1917 no assessments are assumed to have been paid in advance. Before October 1, 1918, two assessments are as-

sumed to have been paid. During the next year two more.

This is a sheet of a loose leaf record and is made up on a 20-inch carriage Burroughs adding machine, and the labor therefore reduced to the minimum. After one year is figured the balance of the sheet is made up with but very little extra work, which is especially true in assessments of the same amount.

Assessments that are not evenly divided into ten installments may be evened up after the first year by increasing or deducting the first year's principal, the amount of odd cents.

CIVIC COOPERATION IN CHICAGO

THE INDUSTRIAL CLUB PLAN.

The plan of The Industrial Club of Chicago for Civic Co-operation proposes to make it possible for a large body of citizens, volunteering for that service but without expense to themselves, to be known as Civic Co-operators, and to assist and work with the authorities of the city in an agreed and definite manner in endeavors to secure observance of laws and ordinances relating to health, sanitation, fire prevention and police protection.

Each Co-operator undertakes to observe these laws and, by example and suggestion, to endeavor to bring about their observance by others and for that purpose to assist and as requested to report to or call upon representatives of the police, health, public works or other city departments. A Co-operator may call upon neighbors to assist in bettering conditions in a specified block and such community team work in this unit area should, with the aid of police and other departments, do much to correct abuses which small in themselves often bring about uncontrollable conditions.

Each Co-operator will be furnished with a recorded card of credentials signed by the Mayor, Commissioner of Health and by the chairman of the Civic Co-operation Committee of The Industrial Club.

Card of Credentials as Civic Co-operator.

CITY OF CHICAGO

Certificate of Civic Co-operator

No. 191.....

CITY OF CHICAGO.

The bearer.....
Address

Police—Sanitary District No.....
a citizen of Chicago, is requested to aid and co-operate with the existing authorities of the City, that they may be assisted in securing the observance of Civic laws, ordinances and regulations relating to health, sanitation, fire prevention, and police protection, and to make note of and, as may be requested, to report violations of the same. This certificate may be revoked by publication of name, number and address in the daily press.

Countersigned:

Mayor.

.....
Commissioner of Health.

Industrial Club of Chicago Civic Co-operation Committee:

.....Chairman.

The undersigned, bearer of this card, undertakes to observe the laws, ordinances and regulations of the City of Chicago relating to health, sanitation, fire prevention, and police protection, and by example and suggestion will endeavor to bring about their observance by others, and for that purpose will aid and assist and, as requested, report to or call upon the existing authorities of Police, Health, Public Works or other City Departments.

No.

Co-operators will be furnished with a summary of the city ordinances, relating to sanitary conditions and regulation of streets and alleys and for police protection, in sufficient detail to furnish required information and instructions regulating their action and from these sources it will be possible to learn the

specific matters upon which action may be reasonably taken in respect to many conditions affecting public welfare, such as deposit of dirt or litter in streets or public places, regulations affecting sanitation or contagious diseases, fire prevention, smoke abuses or police protection and which, in the interest of the community, should be corrected.

In practice it is believed that the plan may be developed to work out as follows: A Co-operator, observing, for example, a deposit of garbage or ashes which is unlawful may report the matter to a policeman, identifying himself by his card of credentials, and ask that the situation be corrected. The policeman is instructed to call upon the offender to observe the ordinances and see that this is done. If a policeman is not at hand, the situation may be reported by mail or, if an emergency case, by telephone to the representative of the police department at the district headquarters. These officers are instructed to receive such reports and see that the unlawful condition is remedied. If the matter is one involving departments not directly represented in the district, such as sidewalk conditions, fire prevention, sewers, water supply, etc., the policeman or authority at the district headquarters to whom the matter is reported will make further report to the particular department indicated at the city hall. In making a report by mail or telephone the Co-operator will identify himself by name, address and card number, and will be held responsible for the correctness and the necessity of the report made. If such report is made to a policeman and no attention is paid to it, the Co-operator is requested to make report of this fact to the chairman of Co-operators in his district. This chairman is expected, in turn, to take the matter up with the police captain or lieutenant in the district or with the health inspector. If no attention is then paid to the complaint the chairman will make report of the occurrence in writing to the chairman of the Civic Co-operation Committee of The Industrial Club, who in this respect will act as a general chairman of the co-operative forces. The general chairman has been

requested to bring such a matter directly to the attention of the Mayor or to the heads of the Police, Health, or Public Works departments as they may be concerned.

The endeavor is made in the plan, therefore, to provide a means whereby unsanitary or unlawful conditions may be promptly reported and local correction applied and if no correction is made, to forward the matter on authoritative lines to the heads of the city government. Opportunity is also afforded for Co-operators, combining with neighbors, themselves to bring about better conditions in a block or neighborhood without making it necessary to go to authority of any kind to secure correction.

While the attention of Co-operators is expected to be directed particularly to the blocks in which they reside, it is not confined to this area, but reports of unlawful conditions in any part of the city may be made to a policeman or to the station in the district in which such occurrences are noted.

The privileges of the Co-operator must be exercised in all cases with care and conservatism, having in mind the fact that conditions may necessarily exist in one location which could not be tolerated in others. For example, the method of handling perishable food, in some locations, under present conditions requires the use of sidewalk space which could not be tolerated outside of certain market districts. In other situations the local community needs are best served by push-cart vendors occupying street and sidewalk space which could not be allowed elsewhere. While the conditions surrounding these and similar practices may be improved, the methods themselves could not be arbitrarily stopped without unnecessary hardship.

The Civic Co-operation Committee of The Industrial Club wishes to make it clear that it is endeavoring to set up a plan for co-operative, constructive team work by citizens who desire to improve the conditions around them. It is not for fault-finding or meddlesome interference of any kind; the Co-operator is given a privilege which, if carefully used, may be made the means of great benefit. He is not given an authority.

Believing that the plan affords a non-political, practical opportunity for widespread and continuing effort which will bring about improved conditions, the Club invites citizens in every part of Chicago to join in this work and to sign the applications, and forward them to the office of this committee. Every good citizen is invited to become a Chicago Civic Co-operator.

ABSTRACTS FROM REPORTS FROM
CO-OPERATORS.

Tool shanty left in street after completion of an apartment house; contracting firm called by telephone; promised to remove it; this was done the same day.

Neighbor depositing garbage on the curbstone; policeman notified; garbage removed at once.

Zone of Quiet suggested in the neighborhood of churches during services; general order issued by Superintendent of Police to accomplish this.

Janitor shaking rugs on sidewalk was shown Co-operator card; promised not to do it again.

Boys building bonfire in alley; showed them card; they put out the fire.

Stopped several cases of spitting in street cars and improper dumping of ashes, and secured removal of dead animals since receiving Co-operator card.

Bad over-crowding of aisles in movie

show; proprietor examined my card and promised it would not happen again.

Stopped boys breaking street signs, hitching on railway trains, building bonfires, and stealing grain from boxcars; helped a neighbor who had been cheated by a tradesman; stopped a peddler from beating horses.

Reported leaking fire plug; repaired same day. Asked neighbor to correct dangerous condition caused by trenches across sidewalk; when shown card condition was corrected.

Reported dead animal to policeman; removed in few hours; also secured help from neighbors in clearing walk of ice and snow.

Bonfires and bad alley conditions reported to police and corrected by them.

Broken glass being thrown in sewer by porter; immediately stopped by proprietor when Co-operator card was shown.

Neighbor shown card; corrected unsanitary conditions in back yard; also assisted in keeping walks clear of ice.

Disorderly pool room reported to police sergeant; condition remedied same day and the thanks of neighbors received.

Condition in alley reported to policeman, who promised to take care of it and asked if I was a Co-operator. Said I was not, and he told me I had better join; I wish to be enrolled.



BRITISH MUNICIPAL AND NATIONAL IDEALS

R. V. HARRIS, *Ex-Controller*, Halifax.

Address delivered before the tenth annual convention of the League of Nova Scotia Municipalities held in New Glasgow, N. S., August 25, 26 and 27, 1915.

In his intensely interesting and able address on the national and municipal ideals of Germany, Principal Brunt has, by placing the facts before us, caused us to contrast them, unconsciously perhaps, with our own municipal and national ideals. His exceedingly helpful analysis will enable us the better to obtain a clearer conception of British municipal traditions and national ideals, from which we have derived our own municipal institutions, which have been influenced in their growth and development by the national and municipal experience of the United States. In an address on "The Origin of English Municipal Institutions," at the Antigonish convention in 1912, I traced the gradual development of English civic administration from the earliest times up to the present time and endeavored to show how the past traditions and experience of English municipal life have entered into the building of the British municipal ideals of today. In another address at the Halifax convention of 1911 on the subject of "The Board of Control System of Civic System of Government," I incidentally outlined the municipal organization of England. May I again, in other words, briefly outline the English municipal system and make some comments on that form of government and its practical operations.

The first point I have to note about the English municipal system is that it is generally uniform. All their municipalities consist of towns and cities. There is no technical distinction between a city and a town, for a city is merely a

complimentary title given to some of the largest towns. The system is a little different in Scotland, but the main features are similar to those of England. English municipal governments are created by general statutes which are amended from time to time by subsequent statutes, which statutes lay down the outline or general structure of the government and show in a general way the system under which the municipal government is created. The form of government is everywhere substantially the same. There is a council composed of two classes of persons, councillors and aldermen, and there is a mayor who is not elected separately but chosen by the council and aldermen generally from among themselves.

The elections as a rule are free from corruption. There is very little bribery; there is practically no personation or repeating. In the majority of English municipalities the elections are nominally at least conducted upon party lines; that is to say, a candidate avows himself to be a Liberal or a Tory and the party organizations are called in to conduct his campaign, but in point of fact the elections do not greatly turn upon party lines. In other words, it is not felt that it is necessary for municipal purposes to keep a party organization always working and at full steam in the interests of the party generally, so little has the party to do with the conduct of municipal affairs. Many instances may be cited where a parliamentary election has taken place immediately after a municipal contest which would completely belie the results that men had tried to deduce

from the municipal election. There is little or none of the trouble that is felt here in securing a renomination. It is almost a matter of course to renominate a man if he has been faithful to his party in Parliament or in the council, and if he is personally unobjectionable. The councillors are elected by wards. There are usually three elected for each ward, and one is elected every year, the term of service being three years. They are the directly elected members of the Municipal Council. The aldermen are chosen by the council each November, immediately after the election, and the alderman are chosen to serve for six years instead of for three. The mayor is not directly elected, but is chosen by the council, not necessarily from among its own members. As a rule, I should say in the great majority of cases, the enormous majority of cases, the mayor is chosen from the council. The mayor has not those important special functions which belong to the office of mayor as understood in the United States. He is merely the chairman of the council, and he has no more influence than belongs to a chairman whose business it is to see that the business is properly conducted. Very much depends upon his personal qualities. It is, however, a position of dignity. He is always addressed as "Your Worship" or "Your Honor." He wears a gold chain; the gold chain is often an object of great beauty and it comes down sometimes from somewhat distant antiquity, and these attributes mark out the position as one to which some importance is attached and in which it is always an object to secure a man of ability and character, and if possible, of high social position. There are few mayors who are not considerably out of pocket at the end of their terms of office by the expenditure to which they are put in sustaining the dignity

of the towns by the entertainments that they give. There are, apart from the councillors, no elective officers. The Government is in touch with the people only through the election of the councillors. Everybody else is elected and appointed by the council itself. Therefore every council divides itself into committees and the government of the boroughs is practically vested in these committees. The committees are appointed not by the mayor, as in the United States, but by the council. There is no custom in England at all of leaving any individual person to appoint a committee, neither in the House of Commons nor the House of Lords, nor in any county council, nor in any municipal council do they give so important a function as the appointment of a committee to any single officer. These things are always vested in the body itself.

Many people have the impression that the nobility control municipal government in England. This is a mistake. Take almost any city and review its history. Take the City of London whose present mayor is the 831st in the long list of chief magistrates since the Norman Conquest. All sorts of trades are represented. Thus: Sir Nicholas Wotton, who was Lord Mayor during the reign of Henry V., was a pawnbroker, and had the honor of serving as "uncle" to the King, who being on one occasion hard pressed for money, pledged his jewels with "Old Nick." Thomas Coke, Lord Mayor in 1468, was a boot-maker, and, to promote his business, issued a proclamation ordering the citizens of London to wear boots with turned-up toes of a prodigious length, and fining heavily all those who disobeyed his mandate. John Northampton, successor of that Lord Mayor Walworth who killed the rebel, Wat Tylor, was a bar-

ber when elected, but becoming a member of the clergy during his term of office, claimed the right to occupy the pulpit of any church in the city he pleased. Sir Samuel Fleyer, Lord Mayor in 1761, was a bricklayer, and the famous Dick Whittington was a house decorator. Butchers, brewers, bakers, printers and fishmongers, all figure on the list; drapers and goldsmiths, however, being more extensively represented than any other trade. I mention this to show the democratic aspect of municipal offices in England. The governors are close to the governed. Organized Labor is powerful in Great Britain and the cities are large employers of labor in the municipally-owned trading plants and enterprises; yet the councils of the country have, with only one notable exception, maintained the open shop, and kept control of wages in their own hands. English labor unions have never made unreasonable demands upon municipal authorities nor have they insisted on the application of a particular wage scale, nor have they objected to existing wage scales as unreasonable, nor to conditions as unfair. They have realized their partnership in municipal matters and the reality of democracy. The English council is an honorable body to which the best men of the community aspire. Duty well discharged usually means re-election. Many members continue in the service for twenty years or more. There is a stability and a continuity about the administration, and with it all a steady progressiveness. The exclusion of party politics from the administration of municipal affairs is not legally required, but it is effectively done. The mere party ward-heeler has no control in municipal affairs. In promotions the merit system obtains to a remarkable degree, and the "spoils" system is unknown. Although there is

no civil service law for the English municipality, the merit system is lived up to voluntarily and at the same time as scrupulously as in any American or Canadian municipality having such a law. On the face of things, Parliament can do anything it wishes with municipal governments, but it rarely interferes with them. Instead, it has delegated the duties of governmental supervision of municipal administration to several national boards, the most important of which is the Local Government Board. In the United States and Canada the statute creating the corporation fixes the limit of jurisdiction, and this statute can never be bent to the peculiar needs of a given municipality. When a Nova Scotia town wants to lay a sidewalk, buy a fire engine or increase its water supply, it is necessary to get special legislation enabling it either to do what it wishes, or to provide the necessary funds. This is a slow, tedious experience, and uncertain procedure. It has only to be stated to show the reasonableness of a larger measure of home rule. An English municipality has either the power to do what it wants or it has merely to submit its problem to the Local Government Board and its experts, and action is forthcoming. Municipalities are not told that their powers are limited and restricted by a statute. They are brought into existence as separate corporate entities and told what they think necessary and proper in the interests of the community, and that in doing it they will have all reasonable assistance that the national government can give. So answerable to public sentiment has the council of the English city been that the strongest advocates of commission government in the United States are one in declaring that the fundamental principles of democracy have been applied to the

solution of the problem of municipal government with greater thoroughness in England than in any other country in the world. In theory the English city is even more liable to the evils of special legislation than the cities of the United States or Canada, but much freer from it in practice. Summed up the English municipality is governed by a body of representative citizens in whom sole power and undivided responsibility is vested with the spotlight of direct scrutiny upon their acts at all times. They have for three generations given their cities and towns beneficent rule. They have been able to give graftless administration in the face of the fact that they have in many instances control of large municipally-owned public utilities which employ thousands of men and spend millions of dollars. Such in brief is the English municipal system—the slow growth of centuries—developed from the day when the aldermen and the villagers gathered about the sacred tree and agreed upon the wisest course to pursue in the interests of the communal life, up through the days when the larger needs of the borough made necessary establishment of the parliaments; later the overthrow of autocratic control; still later the eradication, the lopping off of the grafts and parasitic growths of municipal corruption and the re-establishment of democratic ideals freed from the dominance of autocracy, militarism and other doctrines of State supremacy or control.

The great underlying principle of municipal government in Britain is democracy—democracy under restraint. The same democracy that creates and inspires the House of Commons and the mother of parliaments. The same democracy that is ingrained and inborn in peasant and prince alike and is expressing itself on the battlefields of

Europe in the great struggle to live and grow. You know and I know the benefits and privileges of our citizenship and we understand something of the temper of British institutions, but it is impossible for any Canadian to understand the feelings which a loyal German subject, particularly of the conservative sort, entertains toward the State and its authority. That the State should be anything more than an institution for the protection and safeguarding of the happiness of individuals; that it might be considered as a spiritual, collective personality, leading a life of its own, beyond and above the life of individuals—these are thoughts utterly foreign to the British, Canadian or American mind, and very near and dear to the heart of a German.

Such a conception is outside our philosophy. Such a State might have ambitions at variance with the wishes and interests of the majority of its subjects. It is essentially an undemocratic doctrine—this doctrine of an irresponsible State.

A State that is above and beyond the people it governs is not amenable to their conscience or their humanity. If the individual exists for the State, there is nothing which the State may not ask him to do. The necessities of the State are his law. They stand above his conscience, his religion, and his honor. And the first duty of this State which is above law and morals is to perpetuate itself and increase its power. Such a State, realizing that it is bound by nothing but force, must necessarily put its faith in force and force alone. Whatever *Kultur* may mean to the German, to the rest of the world it is the doctrine of organized, scientific, efficient force—without the restraint of morals.

The fundamental difference between the English or Canadian city and the German city lies in the fact that the German city council has little or nothing to do with the actual government of the city. Our cities and towns are ruled by a body of aldermen, elected by the people on various grounds, ranging from fitness for municipal service to mere personal or political popularity. They give to the serious problems of

municipal administration what time they can spare from the pressing calls of private business. In the German city, as already pointed out by Dr. Brunt, the council is chiefly a deliberative and advisory body making recommendations to the magistrate in whose hands lies all actual administration and which is composed in part of professional municipal experts and which is more or less permanent in its composition. Municipal government in England was never originally in the hands of the national government, and the cities and towns of the country have never been regarded as within the sphere of jurisdiction of the central authority. In Germany, prior to 1808, the national government claimed the right to rule the city; and the officers were appointed from among wornout military officers who accepted them in lieu of military pensions. Although in that year (1808) municipal government was put on a new basis, freed from the misrule of the old regime, in the main Prussian cities of today (and all the other German states have followed the example of dominant Prussia) are in practice more under the control and direction of the national Government than are the cities of the British Isles. The former tradition still survives, while in England the old democratic ideal has been the backbone of the municipal fabric, notwithstanding repeated reforms and improvements. The theory in Britain is that the municipality knows better than anyone else the requirements of the city and what is best for it. The theory in Germany (and in Nova Scotia, too) is that the state government knows what is best—paternalism. English municipal government is self-government in the interests of the municipality. German municipal government is the government of a section of the State in the interests of that State for State reasons and purposes. The German plan is undoubtedly elastic, amazingly so. We can afford to be generous in our admiration of a program formulated a century ago, but adapted to fit conditions totally different from present-day conditions. It is literally true that German towns are today being governed, and with complete success, under laws de-

vised to meet conditions of an epoch when large communities did not exist; when one-half the tasks that fall to the modern municipality were not so much as contemplated; when none of the great enterprises upon which the convenience of local communities so largely depends—gas, water and electrical plants, tramway enterprises, and the like—existed; when in a word, the scope of local administration bore such a relationship in character and magnitude to the great tasks that were coming as the obligations of an absolute German prince of the eighteenth century bore to those of a constitutional government of the twentieth century. England and Germany are not places where the municipal reformers are continually trying experiments in the way of improvements upon present conditions as in the United States and Canada. They are alike in the non-existence of municipal unrest. Municipally they are wisely governed and prudently managed and their resources husbanded; they are freed from the sinister influence of the political or civic boss; there is no waste of the people's money; their citizens are contented and take pride in their cities and their cities' welfare. In English, Canadian and American cities and towns in the last analysis, the whole problem of efficient municipal and national progress is very largely one of personnel, and personnel is merely the expression of the character of the electorate: a city, a province, a state, a nation is known by its rulers—and the rulers are the expression of the temper of the people. European cities have been successful for the most part in procuring the services of public men who can supply the quality of safe and sound economic judgment—American cities have not.

That alone is why a system of committee administration in England has proved efficient and a flat failure in the United States. Good municipal government is a fundamental concern in our national life. The affairs with which our city, town and county councils have to deal touch intimately the everyday life of the people, and it is in the interest of all that civic government should be entrusted to competent men.

After all is said about different forms of government and methods of election, state control and home rule, the essential thing, the test of any system of government is the character of the citizenship which it promotes and of which it is the expression. What is the essence of the English municipal and national life? I believe the problem of citizenship at bottom is a moral one. The moral fibre must be strong if the national life is to be real. The strength and greatness of the British character, English, Scotch, Irish and Welsh, lies in the cultivation through the past years of history of the simple homely virtues which have their foundation rooted in a pure, strong religious life, love of justice, love of right, an adequate sense of obligations towards others, the putting of honor, personal and national, before gain or advantage—the great privileges of British citizenship. What has made the England of today can be read in the pages of history. Something of the burdens and suffering and self-sacrifice which former generations have borne for the establishment of freedom of conscience and of speech and of toleration in religion and for the development of the institutions of public justice.

History has evidenced the frequent dependence of military victory on the temper of the fighters under the conditions of peace. Just what goes to make up this temper, from what source it is drawn and under what conditions nourished is a large inquiry. How much of the fighting strength of Britain and Germany is based in the institutions of their national life; how much the manner in which streets are kept clean and the children of the nation educated, indicates the brawn and muscle of the nation is a matter difficult of determining and widely speculative, but of grave and vital importance. How much depends upon the Britisher's high respect for woman, higher standard of public and private morality, is easier to see. In Britain "class" is no barrier. Humanity is superior to national aggrandizement. Militarism is never dominant. The State is not a paternal entity developing the child because he is to be a good citizen, and because he is to be an

efficient soldier. These are the differences which distinguish the Britisher and the Teuton of today. Can there be any choice for you and me between British and German citizenship? Is there not a good reason for perpetuating our ideals by our daily life and educational system and by our public service?

Public service is a duty incumbent on every man. It may not be in the city or county council, but there is a place for you in the fire department, or on the school board, or in the militia, or on the playgrounds commission. You may in these times take your place on a Red Cross committee or help administer the Patriotic Fund, the Board of Trade, the Civic Improvement League, the Boy Scouts. But unless you have done your share and contributed your utmost to the cause of your citizenship you have failed to keep alive and hand on those great principles of honor and love of justice and truth and fair play which have so eminently characterized British municipal and national traditions and ideals.

MR. THOMAS ADAMS. Ottawa:—I should like to move a vote of thanks to ex-Controller Harris. I happen to be one who has had considerable experience in municipal government. I have two criticisms to bring to bear upon the very excellent paper that we have heard. One is that as a Scotsman I object to the frequent use of the word "England." I think the word "Britain" really applies to our whole empire. My chief complaint in Canada is that we do not know enough about British municipal government. Municipal government in England has been a great success for many years. In England they have practically an identical system to the system in Canada. We have in Nova Scotia no department of municipal affairs, and I think that this is a matter that ought to receive close attention at the hands of this Union.

I have very much pleasure in moving this vote of thanks to Mr. Harris, and incidentally getting a word in for the British end.

Motion seconded and passed unanimously.

THE VALUE OF PASTEURIZATION

DEAR MR. LOCKE:

It is not my purpose to enter into a long technical discussion of the virtues or short-comings of pasteurization of milk. But Dr. Blake's rejoinder in your May issue calls for answer, and in conclusion I will make the following statements:

1. In your March issue Dr. Blake apparently offered pasteurization as a panacea for all the ills that milk is heir to.

2. In my discussion in your April issue I tried to call attention to two points: (a) it is not necessary to adopt the minimum requirements of the new State dairy law, but reasonable requirements suitable to local conditions should be determined and adopted; (b) compulsory pasteurization of all milk may or may not be essential or advisable, according to local conditions; in any event it is inadvisable to hastily adopt compulsory pasteurization because Richmond has done so.

3. Dr. Blake, in his rejoinder in your May issue, befalls the issue by misinterpreting my criticism. The point at issue is not technical, but practical. It is not a pasteurized milk supply versus an adequately supervised raw milk supply; it is the practicability of compulsory pasteurization for *all* communities.

There is too much reckless adoption, on the part of cities, of things or measures as cure-alls for existing evils. The septic tank, and its successor the Imhoff tank, are examples of my point. These have been installed frequently where not best adapted to local conditions, and almost always without provision for adequate, intelligent operation. In the same way compulsory pasteurization of all milk may or may not be suitable in a given community, but to adopt it without due consideration and without provision for adequate supervision is foolish.

Finally, I will perform the "*reductio ad absurdum*" on Richmond's position, by recourse to the economic argument. Consider the many small cities and towns

in California, and take the conditions in Palo Alto as fair example (quantatively, not qualitatively. Here we find the milk supply is derived chiefly from small local dairies; only five of these dairies have more than 20 cows each. There are also a number of persons owning one or two cows selling milk. To require compulsory pasteurization of all milk will at once drive out of business the one and two cow dealers (not a bad plan in some respects), and for the small dairies will mean one of two courses: (a) the installation of a pasteurizing outfit at an expense of several hundred dollars, or (b) selling their milk wholesale to a city milk plant at about 16 cents a gallon, whereupon the milk plant pasteurizes and retails it.

The first horn of the dilemma means an immediate outlay which few small dairies can make, and an additional operating expense which may wipe out the slender margin of profit; the second means a reduction of about 50 per cent in the gross income of the dairy.

Richmond's plan means the eventual, if not immediate, elimination of the small local dairy, and the concentration of the milk business in the hands of a few large central milk plants, delivering milk from 24 to 48 hours after production; often this milk is carelessly produced and handled, but by clarifiers the coarse undissolved filth is removed, and that which has been dissolved is rendered *safe*(?) by pasteurization.

The general plan adopted by Richmond is, all things considered, probably the best present solution of the milk problem in large cities. But on economic and other grounds it is emphatically not the best solution of the problem for the small cities and towns. Even though the weight of present scientific authority is against the position I hold, I do not believe that it is the best final solution of the problem for even the large cities.

Respectfully,

HAROLD F. GRAY,

Health Officer.

From the Proceedings of the LEAGUE OF NOVA SCOTIA MUNICIPALITIES

EVENING SESSION, AUGUST 25th,
1915.

Convention met at 8 o'clock p. m., pursuant to adjournment.

CHILD WELFARE, MUNICIPAL RESPONSIBILITY AND OPPORTUNITY.

MISS MARY RITCHIE, *Vice-President*
Halifax Playgrounds Commission.

Child welfare includes so much and in its scope is so far reaching, beginning with the individual child, branching out to the family, the city, the State, and even beyond any one State, that in a short paper only a very limited phase of the subject can be discussed.

The question of the child's welfare begins before his birth. Not only is he affected by his physical, moral and mental environment, but he is affected by the environment of his parents, and even in some instances by that of more distant ancestors.

The problem is how to give the child such conditions that the good in his disposition may be fostered and the evil controlled and eventually overcome. This requires sanitary conditions in the home and school, careful and loving training of the moral nature and an intelligent drawing out of the mental powers.

The child shows at a very early age that play is necessary to his happiness, but every student of child-life knows that it is also necessary to his full and harmonious development. The wisest people who ever lived knew the value of play for young and old. To the Greeks the theatre and the stadium were not less important than the temple. By

festive processions, games and theatrical performances in connection with their religious services they united the pleasure of the people with the worship of their gods. Even in the middle ages, when life was so hard for the many, the people enjoyed pageants and church festivals, with their miracle and mystery plays, as well as the may-pole and dances on the green.

In our modern life, until a very short time ago, the providing of pleasure for the masses was left to those whose only thought was to make money out of it. This still obtains to a very large extent. These amusement resorts very frequently are dangerous to the young people who attend them, either from the class of entertainment provided or from the company to be met there.

Miss Jane Addams tells of a young fellow, who came to her for advice about his pretty little sister, "who wanted to go somewhere every evening." He said he had taken her to "all the missions in the neighborhood, she had the chance to listen to some awfully good sermons and to some elegant hymns, but some way she did not seem to care for the society of the best Christian people."

Fortunately the churches have begun to see the need that young people have in amusement in addition to sermons and elegant hymns.

The social side of the churches' work tends to give a homelike feeling for the church in her various services and activities; the boys of the Cadet Corps become members of the Missionary Guild, and the members of the Girls' Friendly Society not only have their games and social teas, but organize entertainments and concerts, giving the proceeds to some worthy object. But the chief value of the social work of the churches is the

giving young people amusement that really amuses under wholesome conditions. The athletic clubs, debating clubs, amateur theatricals, concerts and social evenings are of enormous moral value to the boys and girls living in cheap boarding houses or crowded homes. I wonder how many of us would like to spend the evenings of one week as these young people would have to spend all their evenings, did they not seek pleasure outside.

The housing of our working classes would have to be very different from what it now is before I should wish to confine boys and girls indoors on a warm summer or a bright, clear winter evening. A girl of our more plegmatic race would not be likely to batter her head against a wall in an hysterical revolt against a life of "factory work all day and no fun in the evening," as a little Italian girl did in Chicago, but how much sullenness and discontent, how much waywardness and folly may not be traced to monotonous work by day and no fun in the evening. Amusement the young must have. Don't let us be too improving in our dealings with them. They will only be young once and one has such a long time in which to be middle-aged and elderly. Let us encourage them to read books that will stimulate their imagination and will take them out of the humdrum of everyday life.—Hans Anderson, *The Arabian Nights* and *Pilgrim's Progress* as a beginning. But while good reading opens a whole world of amusement, we must not forget the child is a young animal and every healthy young animal wants to have active exercise, dull as the sheep is it frisked when it was young. Any-one who has reared a young bull must have noticed its resemblance to a sturdy, healthy boy. A boy who does bad things is not necessarily a bad boy. It is the boy with an active, healthy condition of mind and body, who if no suitable outlet for his energies is provided will get into mischief, but this troublesome activity well directed will give us a fine lad and a successful man. But suppose instead of sympathetic and careful training the boy is constantly blamed and punished, he will at last be-

lieve he is the bad boy every one thinks, and making no effort to do better his whole character will be ruined.

It has been said, by those who should know, that in the United States twice as much incorrigibility occurs between the ages of 13 and 16 than at any other period of life. A love of adventure and excitement leads many boys into crime. Some years ago, when the "Hooligan" created something like a panic in London, judging by the letters and articles in the daily press, when all sorts of severe measures were suggested and the "Hooligan" was described as if he were hardly human, a writer in the *Fortnightly* had the courage to maintain that the "Hooligan" was no worse than the average middle class boy, conditions of life being considered. Had the "Hooligan" had from early boyhood plenty of games in the open air, a clean, bright home and well brought-up friends of his own age he would not have been a "Hooligan"; on the other hand, had one of our boys been given the "Hooligan's" home life, with no place where he could exercise his natural, healthy instinct for physical activity, it might well be, he too would have found an outlet in rowdyism and even brutality.

It is not only at school that the child's education is carried on. Education means more than book learning. The give and take of the playground is a preparatory lesson for the necessary give and take of life. The boy or girl who has learnt to lose a game as a good sport should, has learnt a hard and useful lesson.

Canada, with her boundless resources and her fine climate still lacks population. We have in the past spent vast sums in bringing out immigrants to our shores; many of these are a valuable addition to our country. We have all been stirred by the enthusiasm with which the Russians enlisted for the front, but are there any immigrants more likely to make good Canadians than our own boys and girls? Can we do nothing to prevent the waste of these young lives that might do so much towards building up our country? It is surely the saddest waste that the girl, who might have become a happy, useful

wife and mother, should be wrecked at the very outset of life; that the boy, who in our free, democratic land might aspire to any position, should become a criminal before his boyhood is passed.

In very many cases it is we, not the boy or girl, who are to blame. How can either grow up pure in heart and life, respecting themselves and others, if they have never had even decent sleeping accommodation.

We are verily guilty concerning our brother so long as we do nothing towards making the living conditions of the working classes such that they may rear, not pale, stunted, sickly children, but children healthy in body, pure in mind, and with suitable means of exercising those natural instincts which are necessary to the full development of the young life. Where these are lacking is it any wonder that the child, boy or girl, is led into mischief, if not into crime? Reformation is a difficult, sometimes an almost hopeless task.

If we really believed that prevention was better than cure, would we not be willing to spend money in making good, happy, healthy citizens out of our children, rather than in caring for them in prisons, reformatories and hospitals?

Mr. Roberts moved that the thanks of the Convention be conveyed to Miss Ritchie for her admirable paper, and that it be referred to the Committee on Resolutions. Seconded by Municipal Clerk McDonald of Antigonish and passed.

BUSINESS MANAGEMENT FOR CITIES.

The story of Dayton's rejuvenation under the manager plan reads almost like fiction; but, inasmuch as it is founded on fact, there is no reason to doubt the accuracy of the claims.

It is the difference between business management and political management. Political management concedes "soft snaps" to those on "our side," and is easy going in the matter of expenditures and public contracts. So long as the

money holds out, it is spent, and any promising means of raising more money is resorted to. In one of Dayton's departments it was found that the budget was \$25,000 higher than necessary, and it was forthwith reduced. The old plan would have been to find some excuse for spending this surplus.

It is in the operation of the city's business that the chief triumphs have been attained. The city water system has been brought from a state of inadequacy to high efficiency, at a saving of 200 tons of coal a month for the pumping plant. That is one instance of many: for every branch of the city government shows better service and wider usefulness. Street repairs costing \$23,000 have been paid out of the regular income, where heretofore bonds have been issued for reconstruction of streets. The purchasing agency has saved \$33,000 in one year in buying supplies, without sacrificing quality; and other savings enabled the payment of \$50,000 toward a deficiency left by former administrations. The health department was reorganized with good results; and the city co-operated directly with the people for the improvement of vacant lots. The first year 400, and the second 600 such lots were plowed by the city, when the owners or renters agreed to do the gardening.

It is a record that encourages Santa Barbara to hope for more efficient government when the new charter goes into effect two years hence. While differing in some respects, the main essentials of the Dayton charter are included in the local plan of future administration. Much, to be sure, must depend upon the personnel of the council; and this we should not forget as the time for the next municipal election approaches.—*The Morning Press*, Santa Barbara, Cal.

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda has passed resolution for the paving of portion of Sixth Street.

Albany, Cal. has passed resolution to construct culvert of concrete across Talbot Avenue.

Anaheim has passed resolution for the paving of Broadway.

Ashland, Ore., has taken steps for the creation of a sewer district for the purpose of constructing sewers. Bids were received June 6 for construction of concrete curb and gutter on portion of Granite Street.

Azusa will probably hold a \$40,000 grammar school bond election during the early part of July. A portion of Soldano Avenue will be improved by sidewalk and curbing.

Bakersfield will hold a bond election June 5 to vote \$150,000 for parks. Bids were received May 15 for improving portion of C Street, Oleander Street, M Street and I Street by grading, tamping and rolling. City council has been presented with petition to pave portion of Seventeenth Street for a distance of two miles.

Berkeley received bids May 9 for furnishing 6000 cubic yards of gravel and 9000 cubic yards of rock and screenings. On same date bids were received for 10,000 barrels of road oil. Resolution of intention has been passed for paving, curbing and guttering portion of Walnut Street, Tamalpais Street and Shattuck Avenue.

Bishop will receive bids June 12 for furnishing from 200 to 400 feet of fire hose.

Callexico received bids June 6 for furnishing a lot of reinforced concrete pipe.

Chico high school trustees will hold a \$60,000 bond election June 17.

Coalinga is discussing a bond election for fire protection, and city hall.

Coeur d'Alene, Idaho, may call a bond election shortly to vote \$225,000 for the construction of a water system.

Fairfield received bids May 23 for grading, paving and construction of culverts and bridges.

Fullerton has accepted plans for Union Avenue bridge to cost \$3,000.

El Dorado has made arrangements to call a \$30,000 bond election to pave Main Street.

Gridley will hold a bond election in the near future to vote \$5,000 bonds for municipal park.

Hemet will pave Florida Avenue.

Hillsborough received bids June 6 for grading, paving and otherwise improving El Portal.

Inglewood Union High School District will receive bids June 9 for supplying 1000 opera chairs.

Lindsay. Petitions have been circulated asking board of directors of the Lindsay-Strathmore irrigation district to call a special election to vote \$1,400,000 to irrigate lands in this section. The election will be held June 10.

Lompoc has voted \$5,000 for sewers.

Lordsburg will hold an election on June 9 to vote \$20,000 to build a kindergarten.

Los Banos will hold an election shortly to vote \$75,000 for a grammar school.

Manhattan Beach has passed resolution for improvement of portion of Marine Avenue and West Railroad Drive by paving, curbing and constructing ornamental concrete lighting posts.

Martinez has commenced proceedings for grading and sidewalk of portion of Escobar and High street.

Marysville will hold a special election June 28 to vote \$18,000 to build grammar school.

Mountain View received bids June 7 for a lot of cement sidewalk work.

Multnomah, Ore., received bids May 22 for improvement of Fairview-Gresham Road.

National City is contemplating a bond issue of \$20,000 for construction of good roads.

Newman will receive bids June 13 for construction of a Carnegie library.

Oroville is agitating bonding city for fire equipment.

Palo Alto and San Mateo. Bills have been introduced asking Congress to appropriate \$75,000 and \$100,000 for new federal buildings at the two cities named to be used as postoffices.

Petaluma has taken steps for improvement of Thompson Creek. Plans and specifications were ordered prepared for improvement of Payran and Ellis streets in east part of city. City Engineer will prepare plans for sewer in Cherry Valley. East Washington Street will be curbed and guttered.

Pittsburg Grammar School Board received bids May 21 for class room materials and supplies.

Placerville is contemplating the permanent improvement of Main Street.

Portland received bids June 5 for furnishing one tractor and one combination chemical engine and hose motor car for use of the fire department.

Redding has decided to pave six blocks of streets.

Redondo Beach received bids May 23 for improving Opal Street.

Redwood City received bids May 15 for a lot of fire hose.

Richmond has passed a resolution of intention for construction of sewers on a number of streets. An addition to the high school will be constructed within the next few months at cost of \$64,000. Twenty-third Avenue will be improved by paving.

Riverside Chamber of Commerce has decided to establish a public market under the auspices of the chamber of commerce. Preliminary proceedings for improvement of Fairmont Boulevard. A resolution was adopted for improvement of portion of Jurupa Avenue.

Sacramento will pave portion of Thirty-third Street. Bids were received May 23 for reinforced concrete weir, water cushion, highway bridge, steel railroad bridge, movable gates and all other appurtenances on west bank of the Sacramento River. Several streets will be improved by the construction of sewers therein.

Salinas has passed resolution for improvement of portion of Gabilan Street.

San Leandro has commenced proceedings for paving of portion of Sybil Avenue. Bids were received June 19 for furnishing and spreading oil on street surfaces.

San Rafael city council has taken action looking toward the paving of the Toll Road.

Santa Ana has passed resolution of intention for construction of bridge across Santiago Creek.

Santa Monica received bids May 17 for grading, paving and curbing portion of Grant Avenue. On May 15 bids were received for a lot of water pipe.

Sausalito received bids June 5 for construction of water-bound macadam, concrete curbs and gutters.

Sebastopol received bids May 15 for enlargement of the capacity of the reservoir.

Sierra Madre will receive bids June 15 for a lot of pipe.

Sisson has passed resolution for the construction of sidewalks.

Sonoma received bids June 2 for construction of one course concrete pavement on portion of Napa Street.

South San Francisco has commenced proceedings to improve A, B, C, D, and 1st, 2nd and 3rd Streets by constructing pavements and sewers thereon.

Stockton has decided to pave Miner Street. Sanitary sewers will also be constructed in El Dorado Street. Citizens are discussing erection of municipal auditorium.

Sunnyvale has taken proceedings to pave portion of Washington Avenue South.

Taft is contemplating the paving of Center Street, Main Street, Fourth Street and Sixth Street; estimated cost about \$40,000. A city hall is also being considered.

Tehachapi is contemplating the construction of a high school.

Stockton will spend approximately \$100,000 on a new sewage disposal plant in the near future.

Turlock received bids May 16 for improving portion of Flower Street by oiling, rolling and curbing.

Upland has commenced proceedings for improving portion of Ruedy Street and B Street by paving and curbing.

Venice received bids May 15 for improving portion of Venice Boulevard by constructing asphalt concrete pavement.

Visalia has voted \$105,000 for school purposes.

Wasco, Ore., has voted \$25,000 bonds for construction of a school house.

Whittier has passed ordinance providing for the paving of portion of Philadelphia Street.

Willits has passed resolution for paving of Main Street.

Woodland has voted \$55,000 for improving and extending the water system and \$6,000 for sewer extensions.

Yreka's jitney ordinance No. 102 has been upheld by the Supreme Court.

CALIFORNIA COUNTIES.

Amador County is planning to raise \$15,000 for road to Silver Lake.

Butte County. Nelson has voted \$10,000 for construction of new grammar school. Richvale has voted \$150,000 for construction of drainage system.

Contra Costa County received bids June 5 for construction of one-story frame library building in Town of Concord. Moraga has voted \$12,000 for school house. San Pablo Avenue will be paved shortly.

Fresno County Highway Commission after making a careful investigation have recommended a county bond issue of \$3,600,000 for construction of 441 miles of permanent highways.

El Dorado County received bids June 6 for construction of a new bridge over the South Fork of the American River at Coloma.

Imperial County is contemplating a \$1,000,000 bond issue for good roads.

Kern County received bids June 8 for improvement of McKittrick-Maricopa Road by grading, paving and construction of bridges.

Kings and Fresno Counties. A number of irrigation districts are proposing a \$6,000,000 reservoir to impound the waters of the Kings River.

Los Angeles County has decided to pave Topanga Road. On June 6 a \$11,350,000 bond

issue will be voted on as follows: \$1,800,000 for outfall sewer; \$300,000 for the Second Street tunnel.

Marin County. Novato will have a new school house.

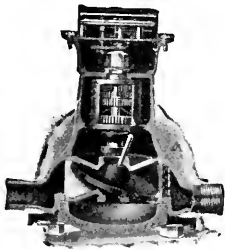
Mendocino County received bids June 6 for construction of a bridge over Salmon Creek.

Monterey County received bids May 19 for grading and macadamizing the Del Monte-Seaside Road.

Napa County will receive bids June 20 for building two masonry and concrete highway bridges across branch of Capell Creek. On same date bids will be received for reinforced concrete bridge over Wild Horse Canyon Road. Bids will also be received June 20 for construction of two-story concrete Hall of Records.

Orange County. A movement is on foot to improve the Santa Ana Canyon Road in order to provide a good highway from Riverside and San Bernardino Counties to the Orange County line. On June 17 Newbert Protection District will hold an election to vote \$55,000 bonds to cut channel to ocean.

Riverside County will hold a bond issue in August to vote bonds to improve roads and construct bridges. Supervisors have decided to improve drainage district by constructing channels, bridges, etc. Bids were received June 7 for improving 2.86 miles of roadway from east end of the present pavement to



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

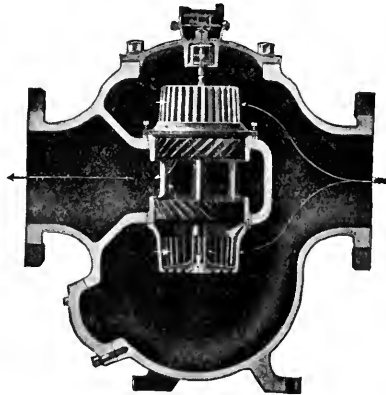
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

foot of Beaumont-Moreno Road; improvement to consist of paving.

San Joaquin County received bids May 18 for furnishing, installing and maintaining 100 c. p. 6.6 Ampere, series Type "C" Mazda lamps. Bids were received on June 6 for improving New Hope Landing.

San Luis Obispo County received bids June 6 for five reinforced concrete bridges and one steel truss bridge.

San Mateo County received bids June 5 for construction of a portion of the Mission Road beginning at the State highway and extending a distance of 0.626 miles. Bids were received on same date for construction of a county jail. Work will soon be started on the State highway from Beresford to Redwood City.

Santa Clara County received bids June 5 for improving 14 miles of highway at cost of about \$200,000.

Santa Cruz County received bids May 19 for construction of steel bridge over Rodeo Gulch.

Shasta County will build two new bridges; bids will be received some time in July.

Siskiyou County is contemplating the construction of road from the forks of the Salmon Creek to Somes Bar. Three new bridges will shortly be constructed. At next tax levy provision will be made for funds for the construction of new highway over the Forest House mountain between Yreka and Fort Jones.

Stanislaus County received bids June 13 for construction of reinforced concrete bridge over the Tuolumne River.

Tulare County is contemplating the building of bridges along the highway at cost of about \$45,000.

Yolo County has voted \$200,000 to build courthouse.



Vacation Trips

Reduced Round Trip Fares TO Mountain and Seaside Resorts

Monterey Bay Points
Lake Tahoe
Sierra Resorts
Yosemite
Lake County Resorts
Shasta Resorts
Klamath Lake Region
Crater Lake
Los Angeles and Its Beaches
San Diego and Its Exposition

For Fares, Sale Dates, Train Service, Etc.
Ask Southern Pacific Agent

Mention "Pacific Municipalities" when writing for catalogs.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Health department, creating and providing for appointment of officers. Berkeley, 230.

Bonds, issuing of. Whittier, 231.

Buildings, regulating construction of. (Amending). Manhattan, 233.

License on theaters, entertainments, where medicines or medicinal preparations are sold. Sacramento, 234.

Bonds, issuing of. Dimuba, 235.

Intoxicating liquors, regulating of. Tulare County, 236.

Junk zones, regulating of. (Amending). Napa, 237.

Water, regulating use and payment of. Grass Valley, 238.

Recorder, fixing compensation of. (Amending). Newport Beach, 239.

Obstructions and nuisances in streets, prohibiting of. (Amending). Red Bluff, 240.

Business licenses. (Amending). Red Bluff, 241.

Stables, garbage and drains, providing care of. Red Bluff, 242.

Grades, changing and establishing of. Whittier, 243.

Fire limits, fixing of. Berkeley, 244.

License for junk dealers, pawn brokers, secondhand dealers. Grass Valley, 245.

Grades, fixing and establishing of. Arcadia, 246.

Official bonds, of town clerk, town treasurer and town marshal. Mountain View, 247.

Billiard halls and pool rooms, regulating of. Whittier, 248.

Intoxicating Liquors, requiring license for the sale of. (Amending). Walnut Creek, 249.

Water, regulating use of. Corcoran, 250.

Municipal water department, establishing of. Santa Maria, 251.

Franchise, granting to Pacific Telephone and Telegraph Company. Hermosa Beach, 252.

Dairies and milk, regulating of. Palo Alto, 253.

Sea weed, prohibiting damaging, cutting or removing of. Santa Barbara County, 254.

Licenses, regulating of. (Amending). Ferndale, 255.

Street improvements, ordering of. Santa Monica, 256.

Center line and curb grades, changing of. Santa Cruz, 257.

Special election, for bonded indebtedness. Santa Monica, 258.

Franchise, to erect, construct, maintain poles and wires to be used in the operation of telephone lines. Napa County, 259.

- Benzine, gasoline, naphtha**, regulating storage of. Sacramento, 260.
- Spur tracks**, fixing charges to be exacted for services. Sacramento, 261.
- Water mains**, fixing rates for making installations. Sacramento, 262.
- Building nuisance**, providing for the abatement of. Calxico, 263.
- Business licenses**, providing for. (Amending). Calxico, 264.
- Salaries, of city marshal, license collector and ex-officio tax collector**, fixing of. (Amending). Coreoran, 265.
- Franchise**, to gas company. Orange, 266.
- Meetings**, regulating of. (Amending). Upland, 267.
- Gutters**, preventing the obstruction of. Upland, 268.
- Motor vehicles for hire**, licensing and regulating of. National City, 269.
- Salaries of city officials**. (Amending). National City, 270.
- License tax**, regulating of. (Amending). San Mateo, 271.
- Special election for bonds**. Placerville, 272.
- Meetings**, changing place of. Winters, 273.
- House drains and sewers**, fixing rates to be charged. Madera, 274.
- Curb-grade**, establishing of. Modesto, 275.
- Avenues, streets and alleys**, establishing width of. Modesto, 276.
- Meetings**, regulating of. Manhattan Beach, 277.
- Official bonds**, providing for the execution of. King City, 278.
- Official bonds**, providing for. Taft, 279.
- Removal reports**, requiring of. Sacramento, 280.
- Residence district**, creating of. Burlingame, 281.
- Milk**, regulating the use, sale and keeping of. (Amending). Sacramento, 282.
- Warehouse and tankage**, granting Standard Oil Company permission to maintain, operate and erect. Delano, 283.
- Purchasing of real property** for school purposes. Alameda, 284.
- Grades**, changing of. Santa Monica, 285.
- Pawn brokers, second-hand dealers and junk dealers**, requiring records of purchases and sales. Stockton, 286.
- Salary of police judge**, fixing of. Napa, 287.
- Fire limits**, regulating the construction of buildings, the disposal of rubbish and storage of gasoline and other products of petroleum. Tulare, 288.
- Sparring exhibitions**, prohibiting minors' attendance. Sacramento, 289.
- Special election for bonds**. Calxico, 291.
- Recorder**, fixing compensation of. Mill Valley, 290.
- Grades**, naming and establishing of. Tropic, 293.
- Automobiles for hire**, regulating of. (Amending). Santa Ana, 292.
- Bonds**, issuing of. Huntington Beach, 294.
- City manager**, providing appointment and compensation of. Huntington Beach, 295.
- Town officers**, fixing the compensation and bonds. (Amending). Sisson, 296.
- City Recorder**, fixing compensation. Inglewood, 297.
- Fire Company**, providing for the organization of. Glendora, 298.
- Water department**, establishing of. Glendora, 299.
- Grades**, establishing of. Whittier, 300.
- Fire department**, providing for. Pacific Grove, 301.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

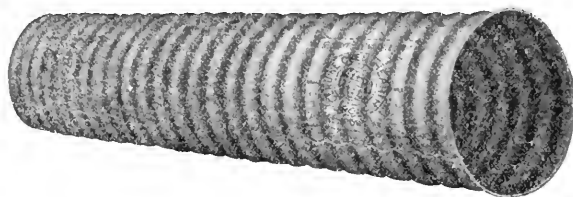
Neptune Meter Co., S. F. & L. A.

National Meter Co., 141 New Montgomery St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

Galvanized Corrugated Genuine Open Hearth Iron Rust-Resisting Culverts



BEFORE placing your orders investigate our culverts which are manufactured from **GENUINE OPEN HEARTH IRON (99.84% PURE)**.

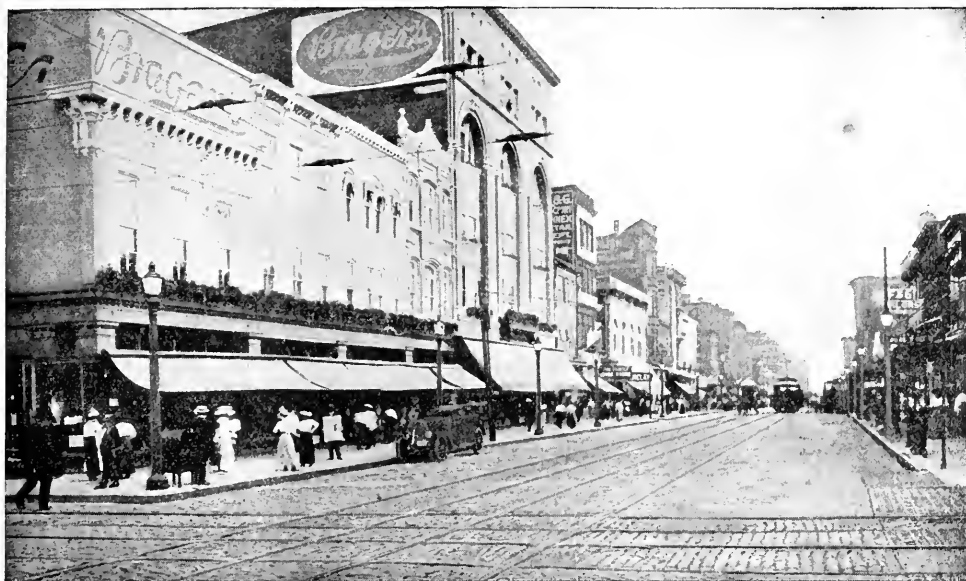
GENUINE OPEN HEARTH IRON is the greatest rust resisting metal now on the market. It is interesting to note that the U. S. government has purchased large quantities of **GENUINE OPEN HEARTH IRON** for use in the Philippine Islands where climatic conditions are particularly severe.

We also carry a large stock of Kentucky Copper Bearing Steel and are in a position to make immediate deliveries of all orders placed with us.

Write us for price list on Arches, Irrigation and flood gates.

AMERICAN CORRUGATED CULVERT COMPANY

706 Hobart Building, San Francisco ——— Factory, West Alameda



An Attractive Business Section is a Business Asset

It is a well known fact that where there is plenty of light, there you will find activity and trade. It is the brightly lighted thoroughfares that bring the business; trade naturally follows the light.

Make your business section a busy section; bring the people down town at night; attract the trade from adjacent towns and villages; enliven the streets and give your city the appearance of prosperity.

Call the business men together and put up to them the proposition of a well-lighted city; show them how a "white way" is a real business asset and a good investment.

Install Ornamental Luminous Arc Lamps as hundreds of progressive cities are now doing.

These lamps give a beautiful, white light and the illumination though brilliant is well diffused.

The artistic poles lend themselves to a large variety of designs—making the appearance of the streets attractive by day as well as night.

Bulletin No. 4955 give details of this most modern system of street lighting. Send for your copy today.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
724 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.

Mention "Pacific Municipalities" when writing for catalogs.

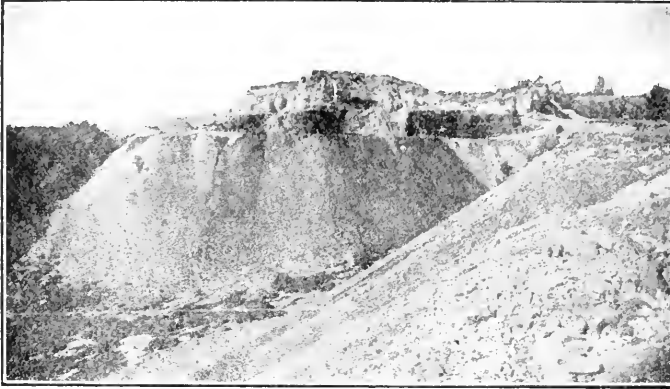
CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

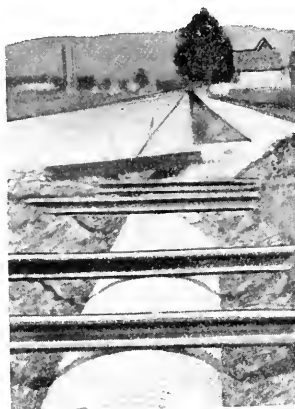


SERVICE



Resists Rust

FIRST



ARMCO IRON Full Circle Part Circle CULVERTS

A neat and permanent improvement to any street or roadway.
Quickly and easily installed at a low cost. Particulars covering various sizes and gauges sent on request.

California Corrugated Culvert Company

411 Leroy St., LOS ANGELES

400 Parker St., WEST BERKELEY

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes

WE MAKE THE

CROWN

EMPIRE

NASH

GEM

EMPIRE COMPOUND

PREMIER METERS

Write for

Catalogue

TYPE K NASH METER

The

SIMPLEST

DISC METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS: WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaughter

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand, Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,
FIRE PROOFING, ROOFING TILE,
FLUE LININGS, FIRE TILE,
LAUNDRY TRAYS,
ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

311-317 CROCKER BLDG., SAN FRANCISCO.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

Visalia, the Convention City.....	251
Taxation.....J. J. Pastoriza	256
Municipal Research in San Francisco.....Fred W. Eckert	258
California Cities in the New Census Report.....Jos. H. Quire	261
The Success of an Unique Experiment by New York State Cities.....	
.....William P. Capes	264
Financing Street Paving.....Christian Science Monitor	268
Some City Manager Results in San Diego.....	273
What Our Pacific Coast Cities Are Doing.....	274
Titles of New Ordinances Received.....	277

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

Mr. City Clerk—

Are You Supplied

with our New Loose Leaf **Segregation Register** for making your report to the State Controller, as just revised?

Have you had any trouble in making out your report? Our Register will save you time and annoyance. William Dolge, C. P. A., has assisted in its preparation and has approved this Register. Offered at the following prices:

Full canvas Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$15.00.**

Russian Corduroy Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$17.50.**

Current Binder, one set Indexes, one copy of Instructions and 200 sheets for **\$22.50.**

Do You Know

that every **City Treasurer**, under chapter 19, approved April 14, 1913, is required to keep a **Bond Register** for registering Bonds?

We have carefully compiled and now have ready for distribution a book for this purpose

SEND US YOUR ORDER

A. CARLISLE & CO.

Stationers and Printers

251 BUSH STREET

SAN FRANCISCO

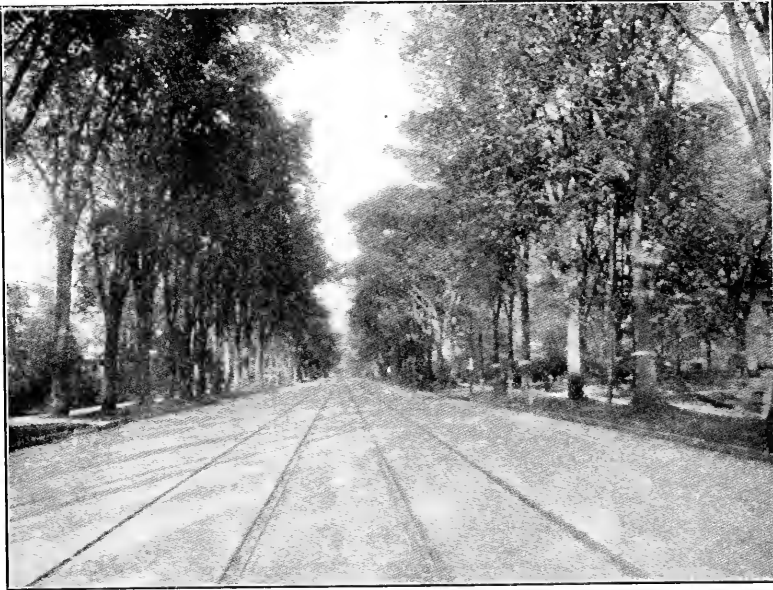
Mention "Pacific Municipalities" when writing for catalogs.

WHAT SHALL THE PAVEMENT BE ?

This question often comes to the minds of taxpayers when paving their street is considered.

Many have stopped and investigated—others go headstrong and with their eyes closed.

It is the duty of all city officials to investigate and obtain for their city's streets the very best construction that can be had; they owe it to the citizens who voted them into office.



Genesee Street, Utica, N. Y. Resurfaced with Bitulithic 1913. Genesee Street is a part of State Highway Route No. 6 between New York City and Buffalo.

It has been demonstrated many times that **BITULITHIC** is the best bituminous construction on the market. It is a pavement made of quality, and every city that has adopted **BITULITHIC** can not attest too highly as to its wearing qualities and to its density, sustaining the heavy horse drawn and motor vehicles.

It is a necessity today to investigate before placing your contracts—cities who wish to save the maintenance expense and have a pavement that has stood the test—

SPECIFY BITULITHIC

Over 400 cities throughout the United States and Canada have laid and contracted for over 40,000,000 square yards of **BITULITHIC** of roadway 30 feet wide between curbs, which is equivalent to over 2200 miles.

Why not specify **BITULITHIC** and get the best?

BITULITHIC is—Unequalled in reputation

BITULITHIC is—Unquestioned in quality

BITULITHIC is—Unrivalled in popularity

PAVEMENT OF PRESTIGE—BITULITHIC

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
Portland, Ore.
St. Louis, Mo.

Chicago, Ill.
Phoenix, Ariz.
Utica, N. Y.
Winnipeg, Man.

Rochester, N. Y.
Nashville, Tenn.
Toronto, Ont.
Vancouver, B. C.

Los Angeles, Cal.
Richmond, Va.
Montreal, P. Q.

Mention "Pacific Municipalities", when writing for catalogs.

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-	-	(City Attorney of Napa)	-	-	WALLACE RUTHERFORD
Second Vice-President	-	-	-	(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON				Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Coreoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropic, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 7

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

JULY, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

VISALIA, THE CONVENTION CITY

The first of June finds the beautiful City of Visalia, where the next convention of the League of California Municipalities is to be held, in a highly prosperous condition. Ten years ago Visalia was just beginning to assume the proportions of a fair-sized town; five years ago it was beginning to look like a prosperous city; today there are unmistakable indications of it rapidly approaching the ten thousand class, and another ten years will undoubtedly place it among the metropolitan centers of the great State of California.

PACE HAS QUICKENED.

Progress of the last three years, in which the pace of the city has appreciably quickened, is the best foundation upon which to base the prophecy that Visalia cannot be retarded. More projects have been successfully launched; more improvements completed than in any similar period of the city's history. The people have become convinced that the dawn of an unequalled era of pros-

perity is breaking over the "Magic City," and thousands are willingly, gladly, exerting their influence, their wealth, and their ability, to promote the Greater Visalia.

OVER SEVEN THOUSAND POPULATION.

The growth of the city has not been spasmodic, nor has it been obtained by the influx of undesirable citizens, which might come with a sudden boom. It has been brought about by a continuous stream of substantial men and women who, looking for a permanent place of abode have cast their lot there, to their advantage. The rate of growth in population is, normally, about 500 each year. By referring to the 1910 government census, Visalia's population was approximately 4000. The registration of voters, as reported on March 21, showed a total of 2800 in the corporate limits. In determining the total population, the writer multiplied by $2\frac{1}{2}$. At this ratio, Visalia has today a population of over 7000. These figures can be accepted as

conservative, because the multipliers are proved to be exact. That many have not registered is not to be doubted. So the city's population is rather underestimated than otherwise.

HAPPY AND PROSPEROUS.

The "Magic City," prosperous, happy, and with a smile on her face so bright that it mirrors in the sea afar off, stands today one of the most progressive little cities upon the world's highways. The emerging from the "turtle crawl" to a stately oak in a few years looms up before us like the giant redwoods in the mightiest forest in the world. The journey from infancy to girlhood is a panorama more beautiful than all the shred-

changes that have taken place in the little city under the shadow of Mt. Whitney since 1900—its expansion and improvements, new business blocks, residences—all betoken a power of progress and upbuilding at work. And the people are building wisely and enduringly for the future—are laying the foundations of civic honor, uprightness and loyalty. Who can picture the future of a city in the promised land itself built on such a foundation? Little Switzerland is indeed a city of hopes, of sunshine, and of flowers.

USING A SPEEDOMETER.

The speedometers which may be applied to measure Visalia's rate of ma-



VISALIA'S NEW MUNICIPAL AUDITORIUM.

ded sunshine dropping smiles on Mount Whitney in the glory of the dawn.

THROBBING WITH ACTIVITY.

One of the best things than can be said of Visalia is that it has lived and traveled through many of the struggles chronicled in the Golden West—and as the sun strikes down into the valley there is unfurled to the gaze a city throbbing with life and beauty. The sweetness of the atmosphere gives us the happy assurance that the city will not only flourish but rise, peak-like, to where the blue sky, jeweled by the stars, reflects the soul of the Creator. The years now in the shadows were faint lamp-glimmers of a little village just entering upon an era of great growth and prosperity. The

material progress have been clicking away at a merry clip for the past twelve months. One of the best tests of a city's financial and business state of being is found in the readiness of its own people to put money into residence uses. Measured by this standard, Visalia must be given a blue ribbon for moving forward: and if the present year maintains its present rate of material progress, some new records will be established. Two very noticeable things have occurred during the past few months to reflect the true spirit of the times and measure the pulse-beat of the city as a whole. One of these epoch-marking achievements is the seven miles of laterals to be added to the trunk sewer at a cost of \$65,000. Miles of streets, curbing and sidewalks

have been built. The other significant deed—one which has brought the city vividly to the admiring gaze of the whole State—is the construction of the finest municipal auditorium in any city of 100,000 population in the United States. The picture reveals Visalia as not content to build for the present alone, but as figuring on a very large and rapid future growth. As confidence begets confidence, so will Visalia's big achievements exert a salutary effect on investments and progress for years to come. The completion of the Southern Pacific depot is close at hand, and is another barometer of the city's progress.

OPTIMISM THE CLARION NOTE.

There is, admittedly, a fewer number of cheap-priced cottages being erected. An inspection shows that a number of high-priced homes are being built. The real estate records show spirited trading in lots, and that people of moderate means are buying home sites on which bungalows will be built this spring and summer.

On the whole, Visalia is a busy city, in a busy and prosperous county. She says to the world, in answering as to its progress and state of being for the first three months of 1916: "We are all right; watch our smoke."

ELEVATE OUR GUNS.

How is Visalia, in the next three or four years, to live up to its possibilities? It is going to get one of the most important things necessary to contribute to future growth—a new hotel. This spirit builds cities, for it shows civic pride. One of the most essential factors in promoting the growth of wealth and population is the building of a permanent highway from north to south through the county. Hundreds of automobiles, buggies and wagons will connect Visalia with her neighbors and tighten the bands which make them grow and prosper together. The ideals of yesterday having been realized, the city must prepare to elevate her guns and aim still higher. The next five years will see such wonderful changes for the better that its citizens will hardly know themselves. Just as the Visalia of today is vastly improved as compared

with ten years ago, so the writer believes the Visalia ten years from now will show greater changes over present conditions.

ELECTRIC HEADLIGHT AHEAD.

All sections of the city are not only witnessing great growth in the matter of beautiful new homes, and newly improved streets, but are making preparations for future growth. Even in the face of the conditions which have been caused by the European war, new residences are springing up. To see the homes through the vista of beautiful shade trees, and to hear all about you wild birds singing, and feel the touch of nature that only Visalia can give, is to have some idea of a home in "Little Switzerland." The paved streets over which hundreds of pleasure seekers, every day and night, drive their fast-going touring cars, is the claim of all automobile lovers.

GATEWAY TO THE MOUNTAINS.

When the main line of the State highway is completed, together with the connections to the coast, thousands of cars from all over the country will come to Visalia, the gateway to the wonderland of the High Sierras—mountains in stupendous grandeur and forests of giant sequoias in which all the isolated groves of big trees in the State could be placed and lost to view; trees that have witnessed time mow down twenty thousand generations of men, but they still stand—stalwart, sound to the core, and good for another cycle of centuries.

The city which is putting an eighth of a million dollars into improvements, such as sewers and an auditorium, is not complaining about "business being a little slow." The interesting thing is that the most confirmed pessimist has to admit that Visalia is gaining a reputation abroad as a "live one." The bank clearings are increasing rapidly, new residents are pouring into the city, and the investments in lots and new dwellings runs high into the thousands. It is difficult to escape the conclusion that the city is entering upon a period of unprecedented development in a material as well as esthetic sense, in which there will be developed new zones of activity

in a building and real estate way. "Little Switzerland" has got the goods, and just so sure as two and two make four, in ten years from now Visalia will be the main city in the finest agricultural valley in the world.

BURST OF RADIANCE.

"Hotel" is the magic word that starts up a thousand sweet prayers in the human heart. For years Visalia has pressed the vision to her bosom, rocked it in the firelight, and cuddled it in a cozy couch till morning. It was a beautiful dream, and as full of rainbow tints as an apple orchard is of bird-songs in May-time. Then came the winter rains, the shadows crept across the leaves, the wind moaned—and hope folded its arms

as sweetly as the brook meandering through the meadow where lovers are.

INCREASE OF \$413,999.80 IN BANK DEPOSITS IN TWELVE MONTHS.

"Out of the fullness of the heart the mouth speaketh." Therefore it is but natural for the writer to say that one of the best evidences of the prosperity of Visalia is reflected in the big increase in bank deposits. The resources on March 11, 1916, compared with the same date a year ago, show an increase of \$413,999.80. The following figures are significant, for they represent alike the increased earnings of the employer and employee, of the laborer and the professional man—and a large part of it is in the form of time deposits for savings:



VISALIA'S BEAUTIFUL HIGH SCHOOL BUILDING.

and went away like the stars in the sky. Today the baby is in the cradle, the moon is not hid, and faces are taking on the color of the morning sun. The hotel "bug" has come back, and in the near future the traveling public will be provided with everything the most exacting could desire. It will be five stories in height, and will represent an outlay of approximately \$135,000. There will be 125 rooms, furnished lavishly for every need. Every evening a splendid orchestra will play classical and popular numbers in the lobby, in the midst of which a beautiful fountain will gurg

	1916.
National banks	\$1,546,530.07
Savings banks	838,039.44
	<hr/>
	\$2,384,569.51
	1915.
National banks	\$1,189,436.36
Savings banks	781,133.35
	<hr/>
	\$1,970,569.71

Increase in deposits, \$413,999.80.

There is solid reason for optimism. The future was certainly never rosier. Visalia faces tomorrow with a smile that won't rub off.

The deposits of the Visalia banks aggregate \$2,384,569.51.

GOOD TO LIVE THERE.

The seven thousand citizens of that city, in the very heart of the "Garden of Eden," have much to be thankful for. The factories have been running full time, with full forces, during the year. The merchants are feeling good; property is worth more today than it ever was before; the automobile busses are bringing business to this city; old dwellings are being replaced by modern bungalows; the Elks are soon to provide their members with a handsome new home, the cost being \$100,000; the Moose are spending \$15,000 on a new temple; \$105,000 are being expended for more school buildings; the National Bank of Visalia contemplates an expenditure of about \$250,000 on a new five-story building this fall; Cross and Lillie are building two very attractive brick buildings, and another automobile garage is being promoted. Hundreds of ears of canned fruit go from that section to every corner of the earth; the butter made in Visalia appears on the table of the rich and poor at home and abroad; cigars made in Visalia are smoked everywhere in the State; our dried fruits are widely distributed; our sugar is used all over the globe; our prunes, unequalled in flavor, are eaten wherever there is civilization; our farm products supply the tables of a vast territory; every man who sits down to a meal of chicken, pork, beef, veal, mutton and eggs thinks of Visalia, the fastest growing little city in the world.

COMMUNITY ORGANIZATION.

Loyal devotion to the cause of agricultural development in Tulare County is one of the policies and activities of the Visalia Board of Trade. It is co-operating with the peach and raisin growers. It is also furthering the movement for a Farm Adviser, hoping to put in the field an expert to visit farmers, and be of service to them with information as to crops and methods. The judgment of the directors of the Board is that this class of work is of paramount importance of its results in increasing the productivity of the soil, and adding

to the prosperity of farmers already located here.

Special reading articles for magazines and newspapers have been written and photographs furnished by the Board of Trade. Nearly all the articles were in response to requests by publishers. The reception tendered to visitors on every occasion was of the most cordial character. Farmers, fruit growers and members of commercial organizations voiced the most generous appreciation of the general activities of the Visalia Board of Trade. The best thought of some of the strongest men in California has been commanded through this body to help to solve development problems—anything that makes for progress of the county as a whole.

A CITY OF HOMES.

There is no question that Visalia is a city of homes; and to go further, it can just as truthfully be said that it is a city of home owners. And it will continue to be just such a place because industry, thrift and love of home have always been a dominating characteristic in Visalia people. And it might be said here that, taking into consideration every condition, it will be many, many years before the home city will ever be confronted with the tenement house question. There is lands upon which to build individual dwelling houses, and plenty of desire on the people already here, and those newly arrived, to live in a house and not a tenement. Home-owning is comparatively easy. Through the Building and Loan Association anyone who receives a fairly average wage can borrow money to erect a home. With home-owning in a home-loving community made so easy, it is no wonder that Visalia is, as it has always been, a City of Homes.

THE MAGIC CITY.

The little village of yesteryear, though it still flings its light adown the drifting skies, has lived its life. We can lift the veil of years that are gone with a sort of reverence, because it has such a wonderful history, but after all it is only the mind wandering amid the romances of the past. The Visalia of today flashes her brilliant hues upon a resplendent to-

morrow—the song of sweetness is in the air, and eyes gaze into space flooded with golden stars. The breath of mountains touches our cheeks, no clouds darken the glow of the skies, the birds are singing, and with glory in the air we tread the ecstasy of the rainbow. Visalia offers every beauty—the bliss of the skies, the sun's radiance and the land-

scape beauty. We have the fields and the orange orchards, the olive groves, the rose gardens, streams of silver and every wing of fancy. Little Switzerland offers more joy, more rainbows, more activity, more green meadows, more acres of alfalfa, more inspiration, aspiration and activity than any other city on the face of the earth.

TAXATION

By J. J. PASTORIZA

Tax and Land Commissioner, Houston, Texas. Address delivered at the Third Annual Convention, League of Texas Municipalities, Greenville, November 12, 1915.

Taxation is such a broad question that no one man can tell all about it in one discourse. I have wondered, as chairman of your committee, why I could not get anyone to write on the necessity of home rule in taxation and the inequity and injustice of taxation as it is practiced; for taxation is purely a moral question: it is not nearly as much a physical question as many people think. Our colleges today are training sanitary engineers, civil engineers, mechanical engineers, electrical engineers, and specialists who are taught how to plan cities, how to govern them, and what statutory laws should be passed, but not one of them is teaching the moral side of taxation.

I want to say a word or two about 100 per cent efficiency in moral government. You may have a city 100 per cent efficient in its physical management; that is, you may have perfect drainage, perfect sewerage, a complete lighting system, street cars running all through your city and carrying people at the lowest price, and all of the public service corporations may be furnishing you their service at the lowest possible rate; you may have a mayor and four commissioners who are absolutely honest, who give all their time to the city, and who are competent and know what to do; and yet the majority of the people themselves will not have been benefited but will actually have lost out. For all of those benefits which give you perfection in physical government do this thing: they

increase the value of the land and reduce the number of landowners. They increase the tenants and the holdings of the landlords. And when you have a country where 95 per cent of the people have to rent and work for somebody else, where five per cent of them own every bit of the earth's surface and 95 per cent of the wealth of the world, you have not helped civilization.

What is the moral side of government? The Good Book said, "Thou shalt not steal." Laws have been passed saying, "Thou shalt not steal." Men agree that it is wrong to steal: that the man who steals does wrong to the man from whom he steals, as well as injuring himself. God Almighty, or Nature, or by what other name you want to call our Creator, created this earth for the use of all men, not a few men. No man has a title to one foot of this earth's surface. He has a piece of paper that gives him a title; but no man can give a title to the earth but God Himself, the One who created it, and our title to the earth's surface in the sight of God is no more correct than the title of a man who buys a stolen horse is correct in the present state of the laws of the land.

Some of you who have read English history know that about three hundred years ago at least 90 per cent of the revenues were gathered from a tax on land. Members of the House of Lords, seeing that the people were independent, interceded to change the laws, because the landlords did not want to work them-

selves, they wanted to control the labor of other men, and they knew that the only way to control the labor of men was to control God's earth. What did they do? They passed a law, that from henceforth Great Britain should collect but ten million pounds a year from rent from the land. They set out to get the balance from other things, the things that poor people need, thereby settling indirectly the greater bulk of the taxes upon the poor people. Remember a rich man drinks no more tea than a poor man. Any tax upon the product of labor is not a tax levied according to the ability of man to pay. If it was, then the poor man would be taxed a cent where a rich man would be taxed a thousand dollars. Having gone that far, the English landlords' next move was to abolish what was called the "commons," certain land that all the people could use. Then they passed further laws, saying that any man could be free from taxation on his land forever if he would pay a given sum. Many of the wealthy landlords of England paid that, so that for three hundred years they paid no taxes upon land as such. They pay at most a tax upon the land when it is improved and rented, and when they do that it is tacked to the rent and the tenant pays it.

Where does the stealing come in? It comes in in this way: that whenever a man gets a thing which he himself doesn't earn, it is stealing. No man who owns a piece of earth ever earned the increasing value of that piece of earth, and when he takes it to himself he is taking something which he has not earned, and if he has not earned it, it follows that somebody else has created it and it belongs to them. Who creates land values? The ingenuity and enterprise of all the people as a whole. Every new man, woman or child that you get into Greenville is worth a thousand dollars to your land values. If you take the values of land in most cities, you will find as many thousand dollars as there are people.

Well, you say, a man puts his money into the land: why should he not get the profit? I will tell you why. If this thing is kept up—men continuing to put

their money into land instead of into business—why, there will be less business and more land speculation and more idle men. Vacant lots never made a city. It takes buildings. It takes factories and it takes business. It takes merchants: and as long as you encourage the high price of land by taxing it low, that long will your business lag in your midst. How are you going to get at it? By the very simple process of repealing all of your tax laws which tax anything save and except the value of land. If you will tax the rental value of all the farm lands in the State, I will stake my life on it that in ten years you will not have a tenant in the whole State. Why should a man pay a landlord rent when he can get the use of the land at the same price? How will he get it at the same price? In this way: Land has a fictitious value now. The rent of it is so high, and the farmer has to pay so much for the things he uses (because the products of labor are taxed so high), that after he pays his rent he has nothing left (except in the very fertile parts of the State). If we exempt from taxation all forms of property except land that is now taxed, and tax that on its rental value, then if a landlord is not satisfied with two dollars an acre for land whose rent is now inflated to five, and thinks he can make more out of it, he can work it himself. He would have to pay the same tax on the land whether used or not, and the millions of idle acres at that tax would be so onerous that these landlords would be renting their lands at reasonable prices. If they did not pay the tax, the State could advertise the land for sale and buy it in, and say to everybody, Here are the lands: you may rent them at a fair rent. And you would take the tenants off the farms that belong to individuals and place them upon their own lands.

Another thing. The farmers, the working people, are paying about 90 per cent of the taxes. Why? Because the greatest values in lands are in the cities. If you were to tax land and nothing else, the tax on country lands would not be as much as it is now on the land and improvements, cows, horses, etc. There being in the cities 90 per cent of the entire

amount that is to be taxed, the cities would consequently pay 90 per cent of the taxes; and the farming communities—I mean here the farmer who works a farm, and not the farmer who works a farmer—the farmer who works would pay less taxes and be more prosperous, and in ten years at least would have a farm of his own if he wanted one.

There is no new panacea for profit. The man who will not work will be poor under any system of taxation. But I believe this system will have a tendency to increase the number of men employed. It will have a tendency to make all men prosperous, and to enable all men to earn enough money to support their families in comfort, to keep their boys in school till they are educated, and to take the girls out of the shops and keep them from having to work for four and five dollars a week in competition with men and rubbing shoulders with men who care nothing for them except for the service that they render.

In Houston we succeeded in exempting from taxation household furniture and other property of a like nature; we taxed buildings at twenty-five cents on

the dollar, and we taxed land at a dollar, and everybody was satisfied except about half a dozen people. They have taken us into court and the case is now in the Supreme Court. In the meantime, we are attempting to carry out the old system in regard to assessing money and notes. The very men who filed this suit, when they came in to assess their personal property, swore that they did not have any personal property. When they came in to assess their buildings, they swore they were not worth over fifty cents on the dollar; and we had been assessing them at twenty-five cents. They would not stand for the full value of their property. After trying to destroy the Houston plan, these very men have been my allies, and the plan has not been destroyed. The percentage will be changed a little bit. One or two of the tax kickers did assess some money and notes, and in thirty days afterwards came back and begged us to take it off the roll and we refused to do so. They are sick of it. They don't like their own medicine, and next year I don't think anybody in Houston will assess one dollar in cash, notes or credits.

MUNICIPAL RESEARCH IN SAN FRANCISCO

By FRED W. ECKERT

EDITOR'S NOTE.—Mr. Eckert has been connected with the University of California during the past year in direct touch with Professor Reed, and is at present partially engaged in the survey work under the New York Bureau.

An awakening interest in municipal affairs in the City and County of San Francisco was marked in the early part of 1914 by the organization of the California State Tax Association. Though primarily directed toward the "correction of existing evils and inequalities in taxation" and to questions pertaining to the revenue side of public affairs, the Association soon found its attention centered upon the matter of expenditures and administration. Rapidly increasing government costs, as they found, had necessitated increased pressure of taxation and had accentuated the defects in a revenue system overburdened beyond its originally intended capacity. Under

the direction of the Association, Mr. Dudley Cates, acting secretary, undertook an investigation of conditions in San Francisco. The results of his study were embodied in a brief, concise report published in June, 1915. As interpreted by Mr. Cates, "The Problem of High Taxes in San Francisco" was a problem of "waste and inefficiency in transacting the city's business"—though some emphasis was placed upon the development of miscellaneous revenue sources as a possible relief to the taxpayer's burden. Mr. Cates' report was a sharpened bit of criticism. It pointed out some of the most glaring defects in administrative routine and machinery. It

presented the problem, but offered no means of solution.

Though inadequate on the constructive side, the report produced an effect. It awakened a lively interest in matters of public business and public policy. Citizen attention was focused upon a much neglected side of government, namely, the administration. Nothing tangible, however, took shape until the approach of the annual budget period for the fiscal year 1916-17. At that time two forces which had been gathering strength suddenly broke out into action. At a meeting of interested public men, the San Francisco Taxpayers' Association was formed, Dr. Butler being elected president and C. L. Sieben secretary. The avowed objects of the Association as expressed by the President were, a lowering of the tax-rate and a more active citizen control of city business, a cutting down of useless activities and a curtailment of expenses along all lines. The officers took some steps toward a permanent executive staff but nothing was accomplished.

Failure of the Taxpayers' Association was probably due to the more aggressive operations of the Real Estate Board. A Tax Committee had been created for the purpose of looking into the matter of local revenues and expenditures and Mr. Bruce Cornwall, actively interested in civic betterment, was given the steering wheel as chairman of the committee. Some radical measures were proposed. Most important of these was a recommendation for a thorough and intensive, constructive survey of all departments of the municipal government by a staff of competent experts. Following this recommendation, a campaign was organized and sufficient funds were pledged to engage the New York Bureau of Municipal Research for this purpose. On June 7 Mr. Sands and Mr. Driscoll arrived in the city. An interview was arranged with Mayor Rolph, who, on being advised as to the purposes and object of the survey gave his hearty endorsement. Willingness to co-operate was shown throughout all the departments and rapid progress was made. Mr. McCombs and Mr. Holton later joined the staff and completed the work

in their special fields. Preparation of the report which grew out of the survey is now under way and publication will likely follow in the course of a few months.

Immediately the survey was well under way, Mr. Cornwall and Mr. Buckbee, president of the Real Estate Board, started a second campaign to raise a guaranteed fund of \$20,000 a year for five years to establish a permanent expert staff for municipal research. This staff was to carry out the constructive recommendations developed out of the survey, to operate as a continuous citizen check upon public business, and to co-operate with public officers toward the economical transaction of public business and an efficient performance of the duties of administration. Sufficient subscriptions, it was hoped, would be in by early fall to perfect organization and to inaugurate a positive program of action. Satisfactory results have greeted the efforts of the organizers to date and the movement seems assured of its desired success.

The contemplated staff will comprise a body of experts in municipal administration under the direction of an executive staff officer, all subject to the supervision and control of a committee or board of trustees acting as the general policy determining body. An absolute non-partisan attitude is to be preserved toward all questions of public policy. Co-operation and constructive criticism are to be the watchwords in dealing with public officials—publicity of facts, in dealing with the citizen body at large. Methods and machinery are to be the materials of study and the objects of reform and improvement; particularistic detail is to be left entirely to the administrative officer. The scope of activity will comprehend practically the entire field of public administration, excluding the technical aspect of education and some phases of public work which are matters wholly of public policy.

In its broadest features as conceived by the men in it, the movement is a sign of healthy civic consciousness to be welcomed unreservedly by the man in and out of office. It means not merely an

effort to cut down taxes, but an effort toward efficient government—efficient not in the narrow sense of dollar economy but in the sense of results accomplished and sensitive responsiveness to public opinion and public needs. It means a government run on a fact basis; it means an attempt to interpret growingly complex activities in simple significant terms, that is, it means democratizing government by providing the citizen with an instrument for effective citizen control. For the administrative officer occupied and burdened with executive routine and detail, an expert staff means study and research toward improving methods and accomplishing greater results—a desired end which lack of time at present forbids. For the citizen, unable to personally inform himself on matters of administration or the review of voluminous and often unmeaning reports, the Research Bureau will afford a medium for translating facts into vital questions of public policy. All of this denotes a stage of advancement and a step in progress which forward-looking men in public work and in civic life will mark with interest.

California cities may find in the inauguration of an organization of the type contemplated for San Francisco some hopeful signs. In connection with developments in other quarters, various possibilities are suggested for a broadening and extension of the Research idea. For some time the University has had under consideration a plan for instituting a government research bureau. This bureau would comprehend the functions now rendered by the Municipal Reference division of the extension department—at present under no active direction, Mr. Quire having left to take up work at Sacramento,—and would be enlarged so as to afford laboratory training for students of public administration and those desiring to enter the public service. At the same time, it would lead to a specialization in the various fields and professions on public administration and thus encourage intensive research in such matters as health protection, recreation, institutional management, civil service, etc. Without doubt, such a plan is highly desirable. The question is, can

some working agreement be reached between the San Francisco Bureau and the University for a mutual exchange of services, such as has been in force between the New York Bureau and Columbia, which will ensure the ends and objects desired by the University and at the same time further the work of the San Francisco Bureau by such co-operation? Under proper conditions a mutually satisfactory and advantageous plan could most certainly be worked out. Tremendous potentialities would exist in that sort of an arrangement, and both sides are keenly alive to the possibilities of the situation. What is eventually done will depend on the vision and foresight of the men who control the present movement.

At this time, word comes from Mr. Neyland of the State Board of Control that an effort is to be made to install a uniform accounting system throughout the various counties of the State. For this purpose, presumably, a highly-trained, technical organization will be necessary. In that organization there exists the nucleus for a permanent staff devoting its entire time to efficiency matters in both State and local administration.

Here then, are three elements, the San Francisco Bureau, the University and the State Board of Control striving toward similar ends. If combined, they would co-ordinate into a magnificent scheme for developing a thoroughly progressive and highly efficient system of administration in public affairs for the State and for its minor political subdivisions. The staff contemplated for the installation of uniform accounting would gradually be augmented to include experts in other lines until a bureau was fully equipped for research in State and county administration. Such a move would represent more or less an elaboration of the activities of the present Board of Control and would be in accord with the trend along this line in other States. Out of the San Francisco Bureau would evolve a body of experts equipped with the most advanced knowledge in municipal administration, while the two acting in conjunction with the University would

afford a field for both theoretical and practical training for the public service. Though at present a visionary program, forces are clearly at work to bring about these results in one form or another. Extravagant as the hope may seem, much of this may be consummated in the next few years. To municipalities and

counties, to the taxpayer, to the citizen and to the government officer or employee such a program would prove highly advantageous and profitable. It means a new era of government as a social good instead of as a traditional "necessary evil." It is in the philosophy and current of the times.

CALIFORNIA CITIES IN THE NEW CENSUS REPORT

By JOS. H. QUIRE

Surprises, agreeable and disagreeable, according to one's point of view and the city of his choice, are the rewards which come from a plunge into the sea of statistics on California's larger cities to be found in the new report of the United States Census Bureau on "General Statistics for Cities: 1915." This compact volume, which should now be shelved in comfortable reach of interested parties following its recent distribution, presents information on governmental organizations, police departments, liquor traffic and municipally owned water supply systems in the 204 cities in the country with a population of over 30,000. California's share is the following nine cities: Berkeley, Fresno, Los Angeles, Oakland, Pasadena, Sacramento, San Diego, San Francisco and San Jose.

To begin with, there is a surprise for some in the frequency with which "highest," "lowest," "most" and other superlatives are exclusively applied in describing some certain administrative activity of a California city as distinguished from all others in the list. These are a few examples in point:

San Francisco's policemen are the highest paid in the United States.

Oakland's police department grew the fastest of any other between 1905 and 1915.

Los Angeles has the highest hotel and restaurant liquor licenses in the country.

Berkeley's police department makes the greatest use of bicycles and motorcycles.

Sacramento is the only city owning its own water supply that does not use meters.

Sacramento has the lowest liquor license in the United States.

San Jose has the lowest bottler's license.

LIQUOR TRAFFIC.

Soldiers in the wet and dry battle at the polls in November who go to the report for ammunition will find some uncertainty in deciding how much of the statistics on the liquor traffic is theirs to use. Inferences one way or the other can be drawn almost at will.

For instance, San Francisco appears to be developing in a slow but sure way into a semi-dry city. It is the only California city on the list of 54 which report a decrease of ten per cent or more in the number of dealers selling by the drink over the period 1905-1910. During these ten years, San Francisco lost 36.8 per cent of such dealers or a total of 1,207.

On the other hand, Oakland, Los Angeles and Sacramento are included in the 24 cities in the United States in which the number of dealers selling by the drink increased during the same period by over ten per cent. Oakland reported the third largest increase in the country, 42.5 per cent, which was exceeded only by Omaha and Dallas.

San Francisco's start on the road toward prohibition loses some of its significance as some of the other figures in the report move into sight. There are eight cities in the country in which there is more than one dealer selling by the

drink for every 250 people. Milwaukee is one. San Francisco is another, even with its 36.8 per cent loss. The number of dealers going out of business over the ten-year period was nearly equal to the sum of all the dealers doing business in the six wet cities enumerated in 1915. But the number remaining exceeds by over 800 the total number of dealers in the other six cities in 1915.

The interior cities rank next to San Francisco in point of the number of dealers per capita. Sacramento comes second with one dealer for every 254 population and Fresno comes third with one to every 390. The dispensing facilities in Los Angeles would appear to be limited when the proportion is only one dealer to every 1284 population.

Oakland showed the third greatest increase in the number of dealers in the country, as has already been mentioned, and, of course, shows the greatest gain in the State. Los Angeles comes second with a growth of 33.8 per cent and Sacramento third with a growth of 18.18 per cent.

Los Angeles and Sacramento stand at the top and bottom respectively in the tables showing license rates for the country. Los Angeles charges the highest hotel and liquor licenses in the country and is among those cities which exact unusually high licenses from saloons and breweries. The lowest restaurant license in the country prevails in Sacramento. This city, with Oakland, has one of the lowest club licenses.

Berkeley and Pasadena are among the 35 cities in the 204 which are dry by one cause or another. They are included in the 15 in which municipal prohibition exists.

POLICE.

Police statistics for the nine California cities do not afford the same interesting contrasts as these figures on the liquor traffic. Ranking close with Oakland's increase in its police force of 212.9 per cent for the ten-year period is the increase in the Los Angeles police force of 154.2 per cent.

San Francisco's position as the best paying employer of policemen is made more striking by the fact that its chief is paid a salary comparatively low when

placed beside those received in cities of the same or smaller size.

The adoption of advanced ideas in police administration is indicated by the fact that Los Angeles, San Francisco and San Diego are among the 25 cities employing policewomen and that in the 60 cities using flashlight systems are Los Angeles, Oakland, Berkeley, San Diego, Pasadena and San Jose. Miscellaneous tables show that Oakland has nearly three times as many signal boxes as Los Angeles and that San Francisco, Sacramento, Berkeley and San Jose still have ungraded police forces.

California cities do not appear to have been converted to the idea of long terms of office for the chief of police. Milwaukee and Richmond, Virginia, have had the same chief in continuous service for over 25 years. Chiefs in other cities were reported to have served from 10 to 20 years and in 29 others the term has been from 5 to 10 years. The longest term reported for any California city is seven years and that in Berkeley. The San Diego and Pasadena chiefs were commissioned in 1913. The remainder were inducted into office in 1915.

Los Angeles' gigantic water supply project dominates the figures presented on the municipally-owned systems of the country. The value of the plant is placed at \$36,058,144. This enables Los Angeles to occupy a position beside New York and the four other cities in the country whose plants are valued in excess of \$30,000,000.

The influence of meters on daily consumption is clearly indicated by the figures on Sacramento, the only city in which meters are not used. The daily consumption in the capital city is over three times that in Pasadena and more than double that of Los Angeles or San Diego. Sacramento is the pioneer city of the State in the matter of furnishing its inhabitants with water.

Figures on San Francisco's salt-water high pressure plant show that in point of number of independent fire mains used the city ranks next to New York. Statistics on fire hydrants reflect the difference in the areas of Los Angeles and San Francisco, the former city reporting nearly six times as many fire

hydrants as the latter. The report, of course, brings out by way of omission the fact that Oakland, Berkeley, San Jose and Fresno are among the 49 cities included in the list which do not own their own water supplies.

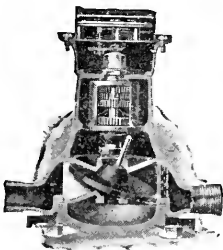
The boards of freeholders who are now at work in Sacramento, Alameda and elsewhere whose purpose is the critical study of various forms of municipal government, will probably give their first scrutiny to the material on governmental organizations.

The tables and text in this section can be readily used by one who wishes to make the claim that California cities are among the progressive of the country. For instance, five out of the nine enumerated—Berkeley, Oakland, Pasadena, Sacramento and San Diego—are among the 76 cities using the commission form of government. Note is made of the fact that San Jose has adopted a commission-manager charter. California cities are also showing themselves in accord with the short ballot movement. The report shows that the majority of clerks, attorneys and treasurers and all engineers are included in the list of officials appointed rather than elected.

In most of these offices no specified term is set. Sacramento and Pasadena, in electing only five officials and these the city commissioners, are the most advanced in the movement for a simplified ballot.

California's commission cities would appear to offer larger salary inducements to the members of the legislative bodies than those operating under the older form. Oakland and Sacramento pay their commissioners a salary of \$3,600 a year, but in Los Angeles and San Francisco, the pay is only \$2,400. Oakland seems to pay better salaries all down the line than Los Angeles. The report shows that the city clerk, attorney, chief of police and city commissioners are all paid better salaries in Oakland than in Los Angeles. The lowest paid policemen in Oakland receives \$212 more per year than the highest in Los Angeles.

San Diego can claim to be the pioneer in experimenting with new movements in governmental organization, on the basis of what the report shows. It was the first California city in its class to adopt the commission plan and was again the first city to be sufficiently interested in



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

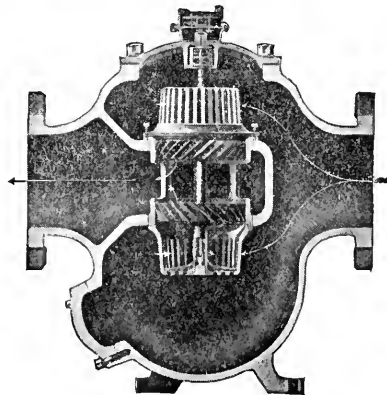
NEPTUNE METER CO.
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

the city manager plan to give it an actual trial.

It is true that figures don't lie, but they are dangerous elements with which to deal when presented in such quantities and conditions as are found in the new report. Inferences can only be warily drawn at best in such a case. Nevertheless, any individual or group who desires to find some answer to the question, How does my city compare with others of its size in the country? is offered an expert guide to aid in the work. Californians are fortunate as are the people in few

other States in having the increasingly detailed and valuable report of the State controller on the financial transactions of the incorporated cities of the State. The new census report on financial statistics of cities for 1915 will soon be distributed. With these three reports at hand covering the same period, there will probably be available for the first time accurate and comparable information which may be made the basis for a sound appraisal of any particular city's administrative organization.

THE SUCCESS OF AN UNIQUE EXPERIMENT BY NEW YORK STATE CITIES

By WILLIAM P. CAPES, Director, City Bureau of Municipal Information of New York.

The cities of New York State have just completed an experiment that is unique in the history of American municipalities. They have conclusively demonstrated that a central clearing house of municipal information is a necessity and that such an institution can be successfully operated on a co-operative basis.

The experiment was started nearly a year ago, and last week at the annual gathering of city officials at Syracuse the undertaking was declared by everyone to be a success. "We don't see how the cities got along without it," was a common expression heard wherever the merits of the institution were discussed.

The institution, known as the New York State Bureau of Municipal Information, is unique. It is the first agency of its kind in the world. Many cities and some States have reference libraries and bureaus and research agencies, but none of these is doing the same kind of work as the New York State Bureau, nor is any operated the same. Some are operated for the benefit of a single city; others are under a private organization or an organization of citizens and officials. A few are connected with the State university. The research bureaus investigate the work of public officials and make recommendations. The municipal reference libraries keep on file for

the use of public officials the information gathered and collated by others. There are a few information bureaus operated in connection with State leagues of municipalities, but these, with one exception, are under the jurisdiction of the State universities. The New York State Bureau is exclusively an institution of and for the cities of the Empire State. Being directed by a council of five mayors elected annually at the conference of official representatives of the cities, it is controlled absolutely by the municipalities. It is also supported only by the cities, and with the sanction of the State. No vested or special interests, no political party and no individual city or class of citizens can control it. It is a non-partisan, non-factional servant of every official in all cities in the State.

Its policy and purpose are expressed in its slogan, "Not to Reform, but to Inform." By this the Bureau does not mean that it objects to reform. It believes, however, that what reformation is needed in the administration of municipal affairs will come more quickly through knowledge, and that when it does come in this way it will last. The Bureau does not advocate anything, nor does it recommend any person, thing or firm. It is not a propagandic agency.

It gives as much information on both sides of a controversial subject as is available and can be obtained. Facts are its merchandise. It believes that policies and plans should be made by the city officials and that the Bureau should confine its efforts to supplying the facts which cities may use in formulating correct plans according to their local conditions.

A lack of knowledge about the multitude of city problems, insufficient time to gather and collate the information they need to solve these problems and inadequate facilities to ascertain where the needed data can be obtained—these are the rocks upon which the careers of many conscientious public officials go to pieces. Each official has to grope through a maze of perplexities and uncertainties in his effort to solve the many intricate problems involving the expenditure of large public funds. Guesses constitute the foundation of many important decisions. Much needless and costly experimentation is being done, simply because a particular city department does not know and has no effective means of learning that some or several other cities have already solved that particular problem.

A comprehensive study of New York State cities, made by the Conference of Mayors, showed there existed everywhere duplication of time, labor and expense to obtain information about systems, costs and results in other cities. At least five cities were writing eighteen months ago to learn what others had done to regulate the jitney bus which at that time was giving city officials considerable trouble. None knew that the information had already been collected by a national organization and was available. One city started to collect data about the number of policemen employed per thousand of population and per square mile of area without any knowledge that the Comptroller's office in New York City had spent time and money gathering the same information from the one hundred largest American cities.

At the annual meeting of the New York State city officials last June it was decided to bring order out of chaos. The experiment of operating on a co-operative basis a central clearing house

of municipal information was, therefore, launched. The Bureau was established in Albany across the street from the Capitol and the State Education Building. The importance of this location will be apparent when the facilities and work of the Bureau are better known.

A cordial and valuable relationship has been established with the State Library, so that this immense plant of information and the services of its staff of researchers are at the Bureau's disposal at all times. It has also established a co-operation relationship with each municipal league in the thirty-five States which now have them, and with many public and private agencies gathering and studying statistics about cities in the United States and Europe. Through newspaper clippings the Bureau keeps in daily touch with each official, bureau and department in all cities in the State. It is also in touch with firms which manufacture apparatus or products used by cities and which offer expert service. It has on file the basic data about all cities in the State, such as the charters, ordinances, budgets, annual and special reports and various codes and regulations. These are kept up to date. While the legislature is in session the Bureau receives daily reports of all bills introduced and copies of all measures affecting cities. Its staff is in close touch with all State departments.

With these facilities the Bureau renders service to the fifty-seven cities in the State. Its chief function is to supply information about any municipal problem to any New York State city official requesting it. During the winter this service was also extended to State officials. The number and variety of inquiries received have been astonishing. When a request comes from a city all departments of the State Library are asked to send to the Bureau the information they have on the subject. If additional information is required, letters, and sometimes questionnaires, are sent not only to New York State cities but also to municipalities in other States. If the information desired is not too detailed or technical and does not call for opinions the State leagues and other co-operating agencies are called upon, e. g., if the State Bu-

reau wants information of this character about Pennsylvania cities it does not write to each city but sends one query to the Division of Municipal Statistics and Information of the Pennsylvania State Department of Labor. The Bureau has an agreement with this and other public and private agencies to supply information about New York State cities and in return to receive any information it may desire about cities in the State or section covered by the particular agency. In this way all of the agencies interested are able to get information more accurately and quickly and at less expense and effort than they could if such a plan were not in existence. At the same time the officials of the cities are saved trouble and expense. After the data have been collected and collated a report is prepared. If the report is of general interest it is sent to the Mayor of each city in the State with a request that after examination he refer it for permanent filing to the particular official interested. If the report is of interest to one or a limited number of cities one copy is sent to the city making the inquiry and the others are filed until called for by any city official.

The staff is constantly on the lookout for information which it believes will interest city officials. When the Director of Public Works of Philadelphia last year issued an unique report, copies were obtained by the Bureau and one was sent to each Mayor in the State. In this way various reports and much literature have been sent to officials.

To keep city officials in touch with one another by distributing new ideas and plans is another important function of the Bureau. The city of Syracuse had been successful in operating a municipal asphalt repair plant. When the report was ready for distribution a copy was sent to each city in the State. When the Health Department of New York City decided to abolish terminal fumigation a copy of the order and a report of the experiment that had been made were sent to each municipal health officer in the State. These are only two of the many new ideas which have been distributed by the Bureau.

Another duty the Bureau has to perform is that of keeping cities informed

about all legislation affecting them. As soon as a bill has been introduced the Bureau receives a copy. If it is general in character, it is referred to the Legislative Committee of the Conference and later the Bureau receives instruction from the committee what to do. If the bill affects only one or two cities notification is sent to the Mayor of these with a request for instructions if any action by the Bureau is desired. The progress of the legislation is watched and the cities affected are kept informed. Whenever the Bureau is required to appear before a legislative committee care is taken to impress upon the legislators that it is acting only as an agent of the city or cities.

The Director of the Bureau, upon request and instruction, appears before any State department for any city. One city had had difficulty with the State Civil Service Commission. The Bureau received detailed information about the controversy and after a few conferences with the State body it was able to submit facts which resulted in a satisfactory adjustment. Several cities have asked for opinions from Attorney General. The Bureau has obtained them and if any was of general interest was sent to all cities in the State or mentioned in the Bureau's bulletin. In like manner the Bureau has represented one or more cities before most of the State departments.

After the Bureau had been established a few weeks it equipped itself to supply information about the manufacturers and prices of apparatus and products used by cities. One city asked the Bureau to send it information about the manufacturers of street signs. A list of manufacturers was prepared and sent to the city with the information that each maker had been notified by the Bureau to send to that city its price list, samples and other information about its product. Much work of this character has been done.

By means of its newspaper clipping service, the Bureau is able not only to keep in touch with the activities of all cities in the State, but also many times to anticipate their needs. One clipping informed the Bureau, that the Common Council of a city had referred to one

of its committee the task of preparing specifications for the collection and disposal of garbage. Without waiting for the city to ask for the specifications of other cities the Bureau sent the information to the chairman of the committee. When it learned through another clipping that a city administration was discussing the salaries that should be paid to its school teachers, the discussion having been started by a demand by the teachers for an increase, the Bureau sent to the Mayor of that city a report giving the salaries of all school teachers in the State.

Another city appointed a special committee to investigate the subject of water sterilization. The Bureau was notified through its clipping service and immediately sent its report giving the experience of cities in the United States with liquid chlorine, hypo-chloride of lime and the ultra-violet ray method.

The Bureau has kept pace with the increasing demand for information by all cities in the State. From September 1 to May 1 it sent to the cities 1,239 reports,—an average of 135 a month. During the last four months it has handled a total of 6,520 pieces of mail. It has prepared and issued reports on 146 general municipal subjects in addition to the special work done for individual cities. Many of these reports are voluminous, particularly those dealing with the various phases of municipal house-cleaning. These consist of reports on the method and cost of collecting and disposing of ashes, garbage and rubbish in and by American cities; also one on street cleaning methods and costs. The Bureau has compiled the water rates and cost and method of street lighting in all the Empire State cities. It has prepared reports giving the salaries of officials in each city in the State, and for one city it prepared a report giving the salaries of 175 different officials in twenty-eight of the fifty largest cities in the United States. It has obtained the experience of many American cities which have used wood block and bitulithic for paving. It has compiled information showing how American cities pension their policemen and firemen and how they regulate various activities by ordinance. It has ready for distribution a compilation of the dif-

ferent traffic regulations in the principal cities of the United States. It has prepared reports about the experiences of cities with various methods of sterilizing water, repairing brick pavement, steel and concrete bridges, public markets and their regulations, night schools to teach English to foreigners, care of charity patients in private hospitals, various forms of municipal government, municipal piggeries, insuring public buildings, waste collection by motor trucks, municipal electric light plants, oiling streets, methods of selecting assessors, municipal subways, women on police force, assessing the cost of ornamental street lighting, municipal infant welfare stations, two platoon system for fire departments, municipal clean-up campaigns, paying by municipal forces, assessments, bond issues and tax rates. It has also prepared reports on the cost of different kinds of pavement laid in New York State cities last year. It has gathered and has ready to loan any city in the State the blank forms used by city purchasing departments, financial departments, charity departments and police departments in American cities.

As a result of this co-operative plan each city in the State is receiving a needed service which it could not possibly duplicate by individual effort and for the same money it pays. Mayor James T. Lennon of Yonkers, Chairman of the Bureau Council said at the Syracuse meeting, "The experience of the first eight months has convinced us that the Bureau is able to get more quickly, accurately, easily and economically information about cities and city problems, both in and outside the State than any individual municipality could. This has been demonstrated many times. One city tried to secure a copy of a valuable publication issued by an Ohio city, but was informed that none was available. The Mayor then appealed to the Bureau which within a week sent the book to him. To secure the data for the report on the cost and method of collecting and disposing of garbage, the Bureau sent a three-page questionnaire to all New York State cities and the fifty largest cities in the United States. Every city responded, giving the Bureau a 100 per cent return for its effort. The Director attributes

the success of the Bureau in this respect to the fact that when it makes a request for information, each city realizes that the information it sends is for the benefit of all municipalities in the State. One answer to an inquiry from the Bureau serves at least fifty-seven cities, and will serve every city in any State which has a State League co-operating with the New York agency."

That the Bureau is meeting a real need in a practical way is indicated by the many demands made upon it by city officials, by the voluntary expressions of opinion received from officials, and by the results obtained by cities which have used the information. With a central agency in the State to send them accurate information many cities, since the establishment of the Bureau, have begun the work of standardizing salaries. Municipal ordinances and codes are being brought up-to-date and made more uniform, only the best in all the cities being used in the work of revision. There is now in many cities a sincere effort to reduce the unit cost of improvements and administrations. Less experimentation will be found today in New York cities than existed a year ago, and in several cities a conscientious effort is being made to eliminate non-productive municipal activities. There is no excuse today for any city official in this State to waste public funds on theories and experiments which other cities have tried.

Charles B. Hill, Commissioner of Finance of Buffalo, recently wrote to the Bureau: "Needless to say I am both pleased and surprised at the painstaking way in which you are taking up this

matter which gives me confidence that your organization should become a vital force in this State."

While mayor of Syracuse, the Hon. Louis Will, had this to say about the Bureau: "I am sure the work already accomplished has proved the value of such a Bureau to the cities in the State and the wisdom of installing it."

In a recent statement, Mayor Frank Lybolt of Port Jervis said, "I am not only much pleased but really enthusiastic over the work which has already been done. When I consider the great amount of time and work required on the part of city officials during the last two years in obtaining information and technical knowledge incident to installing the new ornamental system of lighting and the fire alarm in this city, as well as information desired in relation to new contracts for water and lighting service, I am astounded at what might have been saved had the Bureau been in operation. It is certainly a great step toward a more economical and advanced administration of municipal affairs in the State of New York.

Before the New York State cities had a Bureau every official was for himself. Most of the information sought either was not obtained at all or much of what was secured was inaccurate, biased and expensive in time and money. Now that the State has a Bureau there is far less duplication of work, all available data are secured, no labor is lost, quick service is rendered and efficiency in many ways resulted. The information is accurate, unbiased, far less expensive and put in usable form for all.

FINANCING STREET PAVING

An Expert of National Reputation, Recently Interviewed by the Christian Science Monitor of Boston, Mass., Strongly Advocates the Local Assessment Plan.

That Boston streets never will be properly paved until a large part of the cost of putting each street into proper condition is assessed against the property owners in each thoroughfare so improved, and that the chief reason of the city's lack of funds for this work is

"inadequacy of the legal machinery under which it is operating," are assertions made in an interview with George C. Warren, president of Warren Brothers Company, general contractors.

Mr. Warren declared that it is a proposition which cannot be successfully con-

tradicted that cities which pave with city funds entirely have the poorest streets in the United States, while those which assess all, or part, of the costs of paving upon the abutting properties are provided with the best.

He said that Boston is getting nowhere in its endless discussion between mayor, council, finance commission and other organizations. He declares "the arguments being put forward have every appearance of being made for the mere purpose of obtaining some political advantage rather than to benefit the deplorable condition of the streets."

"Something constructive," is the need in Boston now in handling the street-paving problem, Mr. Warren insisted. He said:

"It may be that some saving can be made in the operation of the several city departments which would allow in the future a larger expenditure from current revenue on the streets, but it can be asserted without fear of successful contradiction that the aggregate of all such items will not be sufficient to afford any adequate remedy.

"The real trouble with the streets of Boston is due to the lack of sufficient available funds to properly construct and maintain suitable street surfaces, and the reason for the lack of funds is the woeeful inadequacy of the legal machinery under which the city is operating.

"The company with which I am connected is doing a large paving business throughout the United States and Canada, and I have therefore been in close touch with the laws and practices of many cities in the matter of the paving of streets. *It can be stated as a maxim that the cities which pay for their street pavements from the general funds without assessing any portion of the benefits upon the property abutting on the improvements are the poorest paved*, and that conversely the cities which assess a large part or all of the cost of street pavements against the property benefited are the best paved.

"The law under which Boston is operating provides that when a new street is opened a portion of the cost may be

assessed against the abutting property, but after such street is accepted, the maintenance thereof must be paid by the city from its general funds. For many years and until quite recently, it has been the practice of the city to accept new streets without requiring that they be adequately paved, with a result that within a few months the pavements must be reconstructed and the expense of reconstruction and maintenance becomes a burden on the city at large.

"Under such a practice, knowing that repairs and renewals will be at the expense of the city, property owners benefited by the opening of new streets use all the influence in their power to have the original improvement made at the lowest possible cost, resulting in a constant heavy drain upon the general funds of the city. Certainly, if the city is to continue to reconstruct and maintain pavements solely from its general funds, it should insist, as the present administration is doing, upon an adequate pavement to start with, the major part of the cost of which to be assessed upon the property benefited.

"Generally speaking, owners of property look with disfavor upon any increase in the tax rate for general purposes, whereas there is comparatively little objection to special assessments for special benefits received. Even if the tax rate for general city purposes were not limited, as it is, by law, the general objection to any substantial increase would result in the defeat at the polls of any administration which had the hardihood to cause it. This, therefore, is a political reason why no remedy can be expected under existing laws.

"Where paving is paid for from the general funds, as in Boston, it is entirely within the power of the administration to designate just which streets shall be paved, and while all the taxpayers contribute toward such general funds, only a small proportion receive any direct benefit therefrom. A pavement laid in East Boston does not directly benefit a resident of the Back Bay, although the Back Bay resident may pay a much greater share of the cost into the general fund than do those directly benefited.

"This lack of direct benefit creates an added objection of taxpayers to contributing for paving through the general funds of the city. Any taxpayer would prefer to pay a tax of \$100 for a pavement in front of his property than to pay a tax of \$1 into the general fund and take his chances of getting no direct benefit whatever. *In most cases a good pavement will immediately enhance the value of a piece of property a great deal more than the cost of the pavement.*

"The present condition is such that the cost of maintenance of the many miles of streets in even passable condition is frightfully high, and this maintenance cost, which is almost entirely wasted, absorbs the funds available out of current revenues to such an extent that no substantial permanent improvements can be undertaken. A competent authority has stated that \$10,000,000 are necessary to put the streets of Boston in proper condition, and there can be no doubt that it would be economical for the city to provide the funds as rapidly as adequate construction work can be carried out and thereby save a large part of the present high cost of maintenance.

"It has been stated by those opposed to borrowing money for street paving purposes that the construction and maintenance of pavements is an expense which should be paid for out of the current income of the city. This view is certainly correct as to maintenance, but is not true as to the cost of original construction or entire reconstruction of streets. To borrow money for such length of time as the original construction, or complete reconstruction of street surfaces, can reasonably be expected to last is certainly conservative finance, but the loans made for construction or reconstruction should be paid before it becomes necessary to again reconstruct the streets. The maintenance cost in the meantime can be provided either by requiring adequate guarantees from responsible contractors or from the general funds of the city.

"There are almost as many methods of financing street paving as there are cities. They vary from the wildest realms of high finance, such as in New York City, on the one hand to piecayune inadequacy and ultra conservatism, such as in Boston, and there are all shades of methods in between. In New York City it has been customary to pay for the cost of paving and repaving on 50-year loans, and many streets of that city have already been paved or repaved as many as three times each on 50-year loans, and the first bonds issued therefor are still unpaid. No sane person would advise the city of Boston to emulate New York in the financing of paving, but there should be no objection from any source to the borrowing of money on serial loans, the last of which will mature within the conservative life of the improvement. Many cities borrow money for 20 years for street paving purposes, but this cannot be considered to be conservative.

"A large number of cities borrow on serial loans for 10 years, confining the forms of construction to those pavements which may reasonably be expected to last that length of time with moderate maintenance cost, and this method is generally considered to be conservative finance. More conservative cities borrow for five years under similar conditions, which certainly should not cause complaint. *There is no well-paved city in the United States, in my knowledge, which pays for the cost of paving, repaving and maintenance out of the general funds and within the current income from taxes, and I believe there never will be for the reasons given.*

"In most cities of New York State it is the practice to assess two-thirds of the cost of paving and resurfacing against the property abutting upon the improvement, the balance being paid from the general funds of the city. The property owners are usually given the option of paying their assessments at once in cash or extending them over a period of years with interest, and in the latter case the assessments constitute a lien on the property until paid. The work is paid for by the city in cash as it progresses, the city merely extending

credit to the property owners so that the cost will not be a burden upon them.

"The city of Utica, N. Y., having a population of 85,000, is one of the best paved cities in the United States, and I am proud of the fact that during my residence there I was instrumental in having the safe, sane, equitable, easy system adopted there which has now been in vogue for more than twenty-five years. The Utica plan is this:

"1. The city pays one-third the cost of all original pavements and the same proportion of all renewals thereof, and provides for this out of the annual tax of less than an average of \$1 per capita of population, which is not enough to hurt any.

"2. The remaining two-thirds of the cost of original pavements and all renewals is assessed on the abutting frontage, each individual person assessed being given the option of paying the whole or any part of his or her assessment in cash, or deferring payment for six annual installments with six per cent interest. To cover the deferred assessments the city issues six paving bonds, each for one-sixth of the whole amount of such deferred assessments, and payable in one, two, three, four, five or six years with five per cent interest, the due rates of the bonds and assessments being coincident. The city loses nothing on account of the credit it gives to the taxpayers and the premium the city gets for the bonds and the one per cent extra interest charged the taxpayers fully pays all clerical or other expenses of the city in the transaction.

"3. The city at large pays for minor repairs required between the time of laying the original pavement and the necessity of reconstruction or resurfacing.

"The result of this system after nearly 25 years' practical trial is that there are few cities in the United States and Canada which as a whole are as well paved today as is Utica, practically every street in the city now having a modern pavement, and the work having been done so easily and steadily that no one has felt the financial burden.

"The practical working out of the system can be illustrated by the typical

result on Oneida Street, on which I am interested as an abutting taxpayer. In 1892 the street was newly paved at a total cost of about \$200 per lot of 50 feet frontage, the assessment being payable in cash or at the option of each taxpayer in six annual installments of about \$33, with interest, say \$35 per year for six years, including interest. The last installment of the assessment was paid in 1898. Then came 13 years' respite, and in 1911 the street was resurfaced at a cost of about \$90 for each lot of 50 feet frontage, or if any desired to pay in six annual installments at a cost, including interest, of less than \$16 per annum. It should be here noted that all this—a thoroughly well-paved city—has been accomplished by a general tax of less than \$1 per capita per annum.

"The city of Portland, Ore., having a population of 210,000, is another example of a well-paved city. It has more than 150 miles of bitulithic pavement, about 100 miles of asphalt pavement, large areas of granite block, vitrified brick and creosoted block pavements, making a total of about 350 miles of well-paved streets, practically all of which have been built within the past 15 years. The entire cost of this vast area of pavements, together with curbing and sidewalks, was assessed against the property owners abutting upon the streets on the front foot basis, the city simply extending credit to the property owners and holding liens on the property as security.

"Upon completion of each contract the city issues certificates or tax bills against each of the abutting owners for their pro rata part of the cost, which tax bills are payable within 30 days of their issue. The tax bills are delivered to the contractor in payment for the work. Each property owner may pay his tax bill to the city treasurer within the 30 days or he may execute an application to have the payments extended so that one-tenth, with interest at 6 per cent, will be payable each year for 10 years, in which case he is required to assent to the amount of the assessment, agree to pay as it becomes due, and further agree that the assessment

shall be a lien upon his property until paid, and waives all right to contest the assessment.

"These liens take precedence over mortgages and all other obligations except direct city taxes. The city then issues 5 per cent bonds, which are direct obligations of the city, secured by the liens on property, to the amount of the face value of the assessments which have been assented to. These bonds usually sell at a substantial premium, and the proceeds thereof, together with the cash payments received from those not desiring extended payments, are used to pay the certificates or tax bills given to the contractor. City bonds so issued and secured are not considered to come within the debt limit of the city. It should be noted that the premium received from the sale of bonds and the additional interest of 1 per cent per annum paid by the property owners provide more than sufficient funds to pay the cost of all clerical work, advertising and printing of the bonds.

"Tax bills which are not paid when due and where no application has been made for extended payments, are turned over to the legal department for collection in the same manner as other delinquent taxes. The city of Portland, Ore., paving bonds have always had a ready market among Eastern investors and doubtless many of them are locked up in the coffers of some of our Boston citizens who are opposed to the city of Boston borrowing money for use on the streets.

"Under the Portland plan a person owning a lot on a 30-foot street having a frontage of 50 feet can secure a first-class pavement costing \$2.50 per square yard for the moderate sum of \$208.33 and can pay for same at the rate of \$20.83 per annum and interest for 10 years. The value of the property is usually immediately enhanced by more than the total cost of the pavement, and the property owner knows that he is receiving a personal benefit from the expenditure and further that he is not contributing to the cost of some one

else's pavement for which he receives no direct benefit.

"What owner of a home would not cheerfully contribute the small cost of thus improving his property? Could not the owner of a property which is rented, secure in additional rent more than the moderate cost of the improvement? The paving of Portland has been accomplished at the sole expense of the property owners in spite of the fact that no street can be paved except with the consent of the abutters owning a majority of the frontage on the street. Furthermore, the law gives the property owners the right to select the kind of pavement they desire for their street. To reiterate, about 350 miles of modern pavements have been laid in Portland during the past 15 years at the entire expense of abutting property owners, the owners of a majority of the frontage on each street making the decision: First, what streets shall be paved; second, what kind of pavement shall be used in front of their property.

"Some such constructive plan as that outlined as being in successful operation in Utica, N. Y., and Portland, Ore., two of the best paved cities in this country, is necessary for Boston before it can hope to become a well paved city. What is urgently needed is proper legislation to correct the present unsatisfactory laws under which its paving must be done.

"The Massachusetts Legislature has within the past month conferred upon the city of Pittsfield the power to borrow money outside the debt limit for street paving purposes and to assess not more than two-thirds of the cost thereof against the abutting property owners. The new Pittsfield law, while not providing the best practice, is a step in the right direction. Doubtless if the several branches of the city of Boston would agree upon some constructive plan for the improvement of the city streets, the Massachusetts Legislature would make such changes in the laws as might be necessary to put the plan into operation."

SOME CITY-MANAGER RESULTS IN SAN DIEGO

On May 1, 1915, the city of San Diego put into effect a limited city-manager plan of government, under which nine of the principal city departments were combined into an operating department in charge of a manager, Mr. Lockwood. These departments were as follows:

- Water.
- Sewer.
- Street.
- Harbor and Wharf.
- Engineers.
- Electrical.
- Building Inspection.
- Public Buildings.
- Pueblo Lands.

In the month of April, prior to the city-manager taking charge, the total expenses of these departments were: For material, \$41,438.35; for labor, \$51,441.76; total, \$92,880.11. For the month of August, the total expenses of the same departments for material were \$22,106.23; for labor, \$27,843.16; total, \$49,949.39. The total number of employees in these departments in April was 796, and in July, by consolidation and elimination of duplicating functions, this number had been reduced to 397.

The office work in the electrical and building, as well as the sewer, departments is now being done by one man instead of three as formerly.

Only 13 men are required to handle the clerical work of all of the departments under charge of the city-manager.

In the water department the number of men required to read meters, make out bills and collect same, was reduced from 12 men in April to 6 in July, with a slight increase in work.

The city-manager issues a monthly

statement, giving details of the work accomplished in the various departments and unit cost of the same.

One of the leading bankers of San Diego states that "during the short time that Mr. Lockwood has had charge of the affairs of the city, he has worked wonders in the way of reducing expenses and running the city on a thorough business basis. Up to the present time, we consider that Mr. Lockwood has saved the city at least \$150,000 per year by his business-like methods in reducing help in the various branches and consolidating others. Mr. Lockwood stands high with all of the taxpayers, both large and small, but I do not think he is very strong with the old political hangers-on who hold their jobs because of their political influence. I do not think if it was put to a vote that there would be any question but that we would retain the city-manager system."

The charter amendments adopted in San Diego provide that the council may from time to time place additional departments under charge of the city-manager. The above results have been accomplished in spite of the fact that he has as yet absolutely no jurisdiction over the following departments:

- Board of Health.
- Purchasing Department.
- City Auditor.
- City Treasurer.
- City Attorney.
- City Clerk.
- Plumbing Inspection.
- Board of Park Commissioners.
- Board of Playground Commissioners.
- Civil Service Commission.

If San Diego, with its annual expenses of approximately \$1,200,000, can save \$150,000 per annum under a partial city-manager administration, covering only half of the departments, what could cities like Oakland save on an annual expenditure of over \$4,000,000?

TAX ASSOCIATION OF
ALAMEDA COUNTY.

∴ What Our Pacific Coast Cities Are Doing ∴

Aberdeen, Wash., city council has ordered street improvements to cost \$25,000 and drain ditches at cost of \$12,000.

Alameda received bids June 20 for paving and curbing portion of Sixth street.

Albany, Cal., voted \$75,000 for construction of new school house.

Auburn will hold a \$25,000 bond election for street paving.

Azusa will receive bids July 3 for constructing cement sidewalks and curbs.

Bakersfield will receive bids July 3 for furnishing fuel oil for county courthouse, hall of records, county hospital and jail.

Berkeley received bids June 20 for paving, grading, curbing and guttering portion of Walnut street.

Burlingame received bids June 19 for complete pumping unit for the waterworks.

Calexico has voted bonds for parks.

Cloverdale citizens are agitating proposition of bond issue of \$25,000 for new school.

Coalinga will hold a bond election shortly for the following municipal improvements: City hall and fire house, \$8,000; auxiliary fire protection system, \$14,000, and municipal swimming pool, \$6,000.

Columbus, Mont., received bids June 19 for constructing sewer system.

Corcoran. A movement is on foot to form an irrigation district which involves the expenditure of about \$6,000,000 and embraces more than 260,000 acres.

Coeur d'Alene, Idaho, has passed an ordinance providing for the issuance of \$280,000 bonds for waterworks and lighting system.

Dinuba received bids June 19 for chassis for an auto truck.

Exeter received bids June 14 for construction of Carnegie Library.

Fowler trustees voted to pave Eighth street at cost of about \$16,000.

Gridley has voted \$55,000 for purchase of 9-acre tract for park purposes.

Hayward is contemplating the construction of a new city hall.

Hermosa Beach has passed resolution of intention for paving of several streets.

Huntington Beach will receive bids July 3 for furnishing materials for construction of municipal gas distributing system.

Idaho Falls, Idaho, city officials are talking of installing a filtration plant at cost of about \$20,000.

Lakeport will receive bids July 10 for construction of Carnegie Library.

Lodi's municipal lighting plant has been operated so successfully that the trustees have prepared an ordinance reducing rates to consumers.

Lompoc has voted \$55,000 for sewers instead of \$5,000 as was mentioned in our last issue.

Los Banos has passed resolution for paving of a number of streets.

Martinez School District will hold a \$51,000 school bond election July 15.

Marysville city council has ordered the paving of several streets.

Merced has voted \$150,000 bonds for a high school and bids will be received for the bonds July 6.

Newport Beach has passed resolution of intention for improvement of several streets by constructing cement curbs and cement sidewalks.

Oakdale will receive donation of \$7,000 for Carnegie Library.

Orange will receive bids July 6 for one horizontal cross compound two-stage steam-driven crank and flywheel air compressor.

Oregon City, Ore., will receive bids July 17 for constructing waterworks system.

Oroville School District will receive bids July 6 for erecting and building one pipe low pressure gravity return steam heating apparatus for the Bird Street Grammar School.

Placerville has voted \$65,000 for municipal improvements, including \$35,000 for construction of two new grammar schools and \$30,000 for paving Main street. Bids will be received July 3 for \$30,000 worth of bonds.

Porterville Union High School Trustees received bids June 23 for construction of a school building.

Portland, Ore., received bids June 19 for two five-passenger automobiles.

Riverside has voted \$40,000 for construction of schools. Bids were received June 27 for construction of macadam roadway in portion of Fairmont boulevard, also combination curb and gutter, cement sidewalks, concrete gutter, concrete catch basins and vitrified iron stone pipe.

Sacramento received bids June 20 for constructing trunk line sewer. Resolution of intention has been passed for asphaltic paving of several streets.

Salinas will pave portion of Front street with asphalt.

San Leandro will improve portion of William street by sewerage. Bids were received June 19 for rock and screenings; also for furnishing oil.

San Mateo School District received bids July 1 for blackboards.

San Pedro has voted bonds for sewers and fire fighting apparatus.

Santa Barbara will construct sewer in portion of Gutierrez street. Concrete road will be constructed on portion of Salsipuedes street.

Santa Monica will shortly hold a \$80,000 bond election for Seaside Park. Portion of Beach street will be paved.

Sisson will receive bids July 7 for constructing cement sidewalks.

South San Francisco will do more street paving.

Spokane, Wash., city commissioners will receive bids July 6 for five steel and concrete bridges.

Stockton will pave several streets. Bids were received June 16 for construction of sewers.

Taft has planned for 22 new street lights; \$70,000 has been voted for street paving.

Tulare has commenced preliminary steps for paving of several streets.

Turlock will soon call an election to vote bonds for high school; amount of issue has not yet been determined.

Watsonville will receive bids July 3 for \$25,000 school bonds.

Whittier received bids June 19 for a lot of pipe and fittings. Bids were received July 1 for fuel oil.

CALIFORNIA COUNTIES

Alameda County received bids June 19 for improvement of East Fourteenth street. On June 26 bids were received for grading of roadway leading from Sunol to Verona, in Pleasanton Road District.

Butte County. Nelson will erect a \$10,000 school house.

Contra Costa County received bids June 30 for placing wearing surface on Division No. 1 of the Tunnel road.

El Dorado County will receive bids July 17 for \$35,000 worth of school district bonds.

Fresno County Highway Commission adopted resolution providing for road bond issue of \$3,600,000 to be voted on in September.

Glenn County. State Highway Commission will shortly call for bids for constructing last link on highway in Glenn County; it will comprise a bridge and about a mile of roadway.

Humboldt County supervisors have recommended a bond issue of \$1,500,000 for a permanent system of concrete roads.

Kern County. Wasco received bids June 12 for Union High School building.

Lake County is considering system of roads; bonds will probably be voted.

Marin County. A safe water supply will soon be given to Muir Woods. Specifications have been adopted for water-bound macadam road for Fairfax; bids will be received in July. State Highway Commission will build a paved road from Sausalito to Larkspur, a distance of six miles; bids will be received in July.

Mendocino County. Bids will be received July 5 for concrete bridge at McNab Creek.

Napa County will receive bids July 25 for construction of masonry and reinforced concrete bridge across Conn Creek. On same date bids will be received for improvement of county road from Napa to Napa Soda Springs.

Placer County has adopted plans for a 94-foot bridge across ravine on the Dairy Farm. Plans have been ordered prepared for bridge across Auburn Ravine at Virginiatown.

Riverside County has passed resolution ordering the organization of storm water district to be known as Elsinore Storm Water District. Dikes, levees, ditches, canals, reservoirs, shafts and other improvements will be constructed.

Sacramento County is considering bond issue of \$1,750,000 for roads.

San Joaquin County supervisors have decided to establish a free county library.

San Mateo County. Menlo Park is organizing a fire department. Surveys will shortly be made for highway from Pescadero Park to Redwood Park, a distance of about 20 miles. Legislature appropriated \$10,000 toward this highway with understanding that San Mateo County would contribute all in excess of \$10,000.

Santa Barbara County will receive bids July 3 for constructing reinforced concrete bridge across San Antonio Creek. On same date bids will be received for constructing concrete arch bridge across Gaviota Creek.

Shasta County. State Highway Commission received bids June 26 for constructing 16½ miles of road and two reinforced concrete bridges, one 541 feet long to cross Sacramento River and the other 120 feet long to span Salt Creek.

Stanislaus County will receive bids July 11 for applying wearing surface to the Newman and McHenry Roads.

Sutter County. Live Oak Chamber of Commerce has started a movement for a county bridge across the Feather River at cost of \$30,000. Brittain Grammar School District want bond issue of \$15,000 for a new school.

Tulare County supervisors have ordered county surveyor to draw plans for concrete bridge across Tule River at Success at cost of about \$6,000. Bids will be received July 5 for construction of reinforced concrete bridge over the Kings River.

Ventura County will receive bids July 8 for constructing two timber bridges and one combination steel and timber bridge on the Matilija Road. Bids will be received July 10 for grading and constructing culverts on 1.51 miles of road. On June 27 bids were received for grading and paving with concrete 8.57 miles. Bids were received on June 28 for constructing reinforced concrete trestle across Sespe Creek. State Highway Commission will receive bids early in July for road construction work one mile east of Carmarillo.

Yolo County. Guinda will hold a bond issue shortly to vote \$8,000 for a new school.

Yuba County has adopted resolution requesting the Federal government to send engineer to plan a system of roads there.

Plate Girder Bridges For Sale

Three plate girder bridges, aggregating 1,020 ft. in length, consisting of 50 plate girders, 30 ft. long and 3 ft. deep; 40 plate girders 60 ft. long and 5 ft. deep, and steel supporting towers. Fabricated by Milliken Brothers, Staten Island, under Robert W. Hunt & Co's inspection for mill and shop. Bridges were not erected; steel is new and in excellent condition, stored near Santa Fe tracks, San Diego, Calif. Plans and specifications may be obtained upon application to Purchasing Department.

San Diego Electric Railway Company San Diego, Cal.



Summer Vacation Trips

**Reduced Round Trip Fares
TO
Mountain and Seaside Resorts**

Monterey Bay Points
Lake Tahoe
Sierra Resorts
Yosemite
Lake County Resorts
Shasta Resorts
Klamath Lake Region
Crater Lake
Los Angeles and Its Beaches
San Diego and Its Exposition

**For Fares, Sale Dates, Train Service, Etc.
Ask Southern Pacific Agent**

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Argentine ant expert, providing for the appointment and compensation of. Berkeley, 308.

Automobiles, relating to. (Amending.) Napa, 361.

Annexation of lands. Coeur d'Alene, 313.

Animals and vehicles, prohibiting the standing on streets where interurban or street cars run. (Amending.) Riverside, 362.

Acquisition of real property in San Joaquin County. Stockton, 366.

Berries, prohibiting sale by box in boxes smaller than a certain standard. Riverside County, 314.

Bonds, issuance of. (Amending.) Loyalton, 335.

Bonds, issuing of for street improvements. Whittier, 345.

Business licenses. (Amending.) Berkeley, 355.

Bonds, providing for the issuance of. Coeur d'Alene, 357.

Committees, providing the appointment and defining their authority and duties. Sisson, 307.

Curb and sidewalk lines, establishing of. (Amending.) Rio Vista, 310.

Cremating of dead bodies, prohibiting. San Joaquin County, 319.

City property, prohibiting the defacing of, also the tampering with life lines and the building of fires. Hermosa Beach, 322.

Contract, awarding to Pacific Gas and Electric Company. Berkeley, 352.

City Marshal, fixing duties of. Inglewood, 358.

Conduits, granting the city of Oakland permission to construct. San Leandro, 359.

Fishing, regulating of from Municipal Wharf and prohibiting overhead casting. Redondo Beach, 304.

Fireworks, prohibiting sale and discharge of, excepting fireworks less than two inches in length, roman candles, flower-pots, pinwheels, cap pistols or canes and torpedoes. (Amending.) Napa, 369.

Fire crackers, prohibiting discharge, except on holidays or after permission from the President of the Board of Trustees. Coronado, 334.

Fire arms, prohibiting discharge of. (Amending.) Corona, 353.

Franchise, granting to Western Pacific Railway Company. (Amending.) Sacramento, 374.

Franchise, granting to Pacific Electric Railway Company for the construction and maintenance of gauge double track. Santa Ana, 378.

Gaming, prohibiting of and providing penalty for. Delano, 303.

Garbage, rubbish, waste matter, manure and dead animals, and the care of cesspools, toilets and private yards, regulating of. Salinas, 306.

Grades, changing and re-establishing of. San Francisco County, 316.

Grades, changing and re-establishing of. South Pasadena, 339.

Grades, establishing of. Salinas, 351.

Grades, changing and re-establishing of. El Paso de Robles, 368.

Garbage, preventing dumping in city limits. (Amending.) Sacramento, 369.

Gas meters, preventing contrivances for injuring and defrauding of. Sacramento, 370.

- Horses and other animals**, regulating riding or driving of, and regulating the driving of automobiles, motorcycles and other vehicles on public streets. (Amending.) Coeur d'Alene, 311.
- Horticulture interests**, promoting of. Tulare County, 341.
- Intoxicating liquors**, prohibiting the sale, furnishing or giving away of. Delano, 302.
- Intoxicating liquors**, regulating the sale, serving, furnishing and giving away by clubs, providing a license tax thereon. Bakersfield, 333.
- Jail buildings**, altering and repairing of. San Francisco, 376.
- Laundries**, prescribing buildings in which they may locate. Sacramento, 373.
- Manager of the municipal gas distribution system**, prescribing his duties and compensation. Newport Beach, 310.
- Meetings**, for the Board of Trustees, providing for. Tracy, 315.
- Meetings**, fixing time and place. (Amending.) Delano, 338.
- Musical instruments**, relating to the playing on Sundays. (Amending.) Napa, 348.
- Merchandise**, regulating the sale by the installment plan. Reedley, 363.
- Notices, hand-bills, posters**, prohibiting the posting or tacking of. Tracy, 317.
- Officers**, fixing salaries of. (Amending.) Delano, 336.
- Officers**, fixing bonds. Corona, 354.
- Property**, prohibiting sale or purchase of for burial purposes. Eagle Rock, 343.
- Park Commission**, establishing of. Berkeley, 356.
- Prizes, gifts, enterprises dependent on chance**. Sacramento, 372.
- Rubbish or trash**, prohibiting the depositing or leaving on public grounds. Orange County, 346.
- Streets**, closing and abandoning certain portions. Albany, 305.
- Special election**, providing for. Alameda, 337.
- Streets**, improving of. South Pasadena, 340.
- Salaries of the officers**, fixing of. Taft, 350.
- Salary of City Marshal**, fixing of. Inglewood, 360.
- Service connections**. Sisson, 367.
- Sidewalks**, regulating use of. Sacramento, 371.
- Sewer connections, plumbing and gas fixtures**, relating to. South Pasadena, 375.
- Sidewalks**, regulating width of. (Amending.) San Francisco, 377.
- Taxes**, providing for the levying and collection of. (Amending.) Eagle Rock, 342.
- Taxes**, providing for the assessment, levying and collection of. Mill Valley, 364.
- Trustees**, rules for conducting meetings. Taft, 365.
- Vehicles**, providing that they stop about fifteen feet away from street cars, while they are taking on or discharging passengers. Grass Valley, 318.
- Water**, prohibiting it to drain or flow upon or over public highways. Stanislaus County, 312.
- Weights and measures**, relating to. Riverside County, 320.
- Water rates**, fixing of. Hercules, 321.
- Water rates**, fixing of. Pinole, 344.
- Water services and rates**. (Amending.) El Monte, 347.

LIST OF RESPONSIBLE FIRMS TO BE CALLED ON TO BID FOR PUBLIC WORK OR SUPPLIES

Write for Catalogs. Mention Pacific Municipalities When Writing

This list is arranged as a guide for the accommodation of city officials where advertising for bids is not necessary.

Accountant

William Dolge, C.P.A., 311 California St., S. F.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, Los Angeles, Cal.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Concrete Mixers

A. L. Young Machinery Co., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

Cal. Corrugated Culvert Co., Los Angeles and W. Berkeley.

U. S. Pipe Co., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, San Francisco.

Flushers—Street

A. L. Young Machinery Co., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

Pacific Flush Tank Company, Chicago, New York.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Company, Chicago, New York.

Inspections and Tests

Robt. W. Hunt & Co., 418 Montgy. St., S. F.

Municipal Accountant

William Dolge, C. P. A., 311 California St., S. F.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251-253 Bush St., S. F.

Pavement Materials

Warren Brothers Co., Los Angeles, Cal.

Pipe

U. S. Iron Pipe & Foundry Co., 701 Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., S. F.

Road Machinery

A. L. Young M'chy Co., Fremont St., S. F.

Road Ollers

A. L. Young Machinery Co., S. F.

Rock Crushers

A. L. Young Machinery Co., S. F.

Roofing Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Rubber Goods

Bowers Rubber Works, San Francisco.

Scrapers

A. L. Young M'chy Co., Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Co., Chicago.

Sewer Fittings

Pacific Flush Tank Co., Chicago.

Sewer Pipe and Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.

Street Sweepers

A. L. Young M'chy Co., Fremont St., S. F.

Water Meters

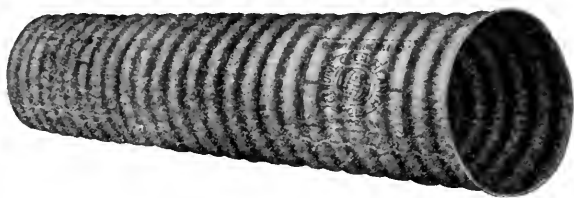
Neptune Meter Co., S. F. & L. A.

National Meter Co., 141 New Montgomery St., S. F.

Street Signs

A. L. Young M'chy Co., S. F.

Galvanized Corrugated Genuine Open Hearth Iron Rust-Resisting Culverts



BEFORE placing your orders investigate our culverts which are manufactured from **GENUINE OPEN HEARTH IRON** (99.84% PURE).

GENUINE OPEN HEARTH IRON is the greatest rust resisting metal now on the market. It is interesting to note that the U. S. government has purchased large quantities of **GENUINE OPEN HEARTH IRON** for use in the Philippine Islands where climatic conditions are particularly severe.

We also carry a large stock of Kentucky Copper Bearing Steel and are in a position to make immediate deliveries of all orders placed with us.

Write us for price list on Arches, Irrigation and flood gates.

AMERICAN CORRUGATED CULVERT COMPANY

706 Hobart Building, San Francisco ——— Factory, West Alameda

Mention "Pacific Municipalities" when writing for catalogs.



Demonstration of High Efficiency Luminous Arc Lamps (Form 17) on Highway near Chico, Cal.

Light Up the Approaches of Your City

Good illumination welcomes visitors, gives an impetus to civic pride, and makes travel easier.

Notice how the Automobile stands out silhouetted against the light foreground.

You can put your city on the Automobile map by lighting your highways with the Form 17 High Efficiency Luminous Arc Lamp.

An excellent example of this lighting is at Gilroy, Cal. A stranger approaching Gilroy is impressed.

Gilroy's progressiveness looms up further in the business section. Here Ornamental Luminous Arc Lamps make the streets attractive, not only at night but by day.

This combination of highway and white way lighting can be worked out in *your* city.

Ask us today for further information.

General Electric Company

GENERAL OFFICES: SCHENECTADY, N. Y.

Los Angeles, Cal.
724 S. Spring St.

Portland, Ore.
Electric Bldg.

San Francisco, Cal.
Rialto Bldg.

Seattle, Wash., Colman Bldg.

Spokane, Wash., Paulsen Bldg.

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.



THEY ARE BUILT TO STAND THE LOAD

Heavy traffic has no terrors for ARMCO CULVERTS. They are built to withstand great loads and to meet the severe service under highways and railroads satisfactorily.

ARMCO IRON CULVERTS

have solved the troublesome drainage problems of numerous California cities, and are all giving a good account of themselves by rendering efficient and permanent service.

Write us for particulars
and prices

CALIFORNIA CORRUGATED CULVERT CO.

LOS ANGELES
411 Leroy St.

WEST BERKELEY
400 Parker St.

WATER METERS

FOR ALL KINDS OF SERVICE

For $\frac{3}{8}$ " to 60" Pipes

WE MAKE THE

CROWN

EMPIRE

NASH

GEM

EMPIRE COMPOUND

PREMIER METERS

Write for
Catalogue

TYPE K NASH METER

The

SIMPLEST

DISC METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK

VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St.

WORKS:
WEST ALAMEDA

SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York

London

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Vancouver, B. C.

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.

Mention "Pacific Municipalities" when writing for catalogs.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

First Annual Report City Planning Commission of San Anselmo.....	287
How One California City Dealt With Its Unemployed Frederick C. Mills	292
Plans for the Visalia Meeting.....	295
Report of Mr. Lockwood, City Manager, San Diego.....	296
The Motor Vehicle Act and Municipalities.....	297
Eliminating Billboards.....Ed. H. McCuiston	298
Progressive Cities Adopt Modern Street Lighting Systems...Fred W. Rea	300
Extract from Annual Report of the City Engineer and Street Superintendent of Richmond.....	303
National Septic Process Protective League.....F. G. Pierce	306
The Celebrated Street Paving Suit of Nashville, Tenn.....	308
What Our Pacific Coast Cities Are Doing.....	310
Titles of New Ordinances Received.....	313

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

Mr. City Clerk—

Are You Supplied

with our New Loose Leaf **Segregation Register** for making your report to the State Controller, as just revised?

Have you had any trouble in making out your report? Our Register will save you time and annoyance. William Dolge, C. P. A., has assisted in its preparation and has approved this Register. Offered at the following prices:

Full canvas Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$15.00.**

Russian Corduroy Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$17.50.**

Current Binder, one set Indexes, one copy of Instructions and 200 sheets for **\$22.50.**

Do You Know

that every **City Treasurer**, under chapter 19, approved April 14, 1913, is required to keep a **Bond Register** for registering Bonds?

We have carefully compiled and now have ready for distribution a book for this purpose.

SEND US YOUR ORDER

A. CARLISLE & CO.

Stationers and Printers

251 BUSH STREET

SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

Quality Alone has Secured for Bitulithic The Highest Esteem of Leading City Officials and Taxpayers

NO GUESS WORK

NOTHING BUT QUALITY

For years **BITULITHIC** has successfully met every traffic condition to which it has been subjected, and its selection over all other forms of paving has invariably followed impartial investigation.



BOSTON, MASS.

Bitulithic Pavement. Columbia Road (at Hewins Street). Laid over old Macadam, 1915

It has been demonstrated many times that **BITULITHIC** is the best bituminous construction on the market. It is the pavement of quality, and cities that have adopted **BITULITHIC** will attest to its wearing qualities, and its ability to sustain heavy horse-drawn and motor traffic.

"We have never tried to
Construct the cheapest pavement,
But have always tried to
Construct the **BEST**"

The City of Boston, Massachusetts, on July 14th awarded a contract for paving Commonwealth Avenue, one of the City's leading and most wealthy boulevards, with **BITULITHIC**, the property owners petitioning and insisting that their Avenue be paved with **BITULITHIC** which they considered to be the best construction.

It is necessary today, to investigate before placing your contract. Cities who wish to save the maintenance expense and have a pavement that has stood the test—

SPECIFY BITULITHIC

Write today for illustrated booklets to

WARREN BROTHERS COMPANY

Executive Offices: Boston, Mass.

District Offices:

New York, N. Y.
Portland, Ore.
Richmond, Va.
Utica, N. Y.
Toronto, Ont

Chicago, Ill.
Phoenix, Ariz.
Nashville, Tenn.
Montreal, P. Q.

Rochester, N. Y.
Los Angeles, Cal.
St. Louis, Mo.
Winnipeg, Man.
Vancouver, B. C.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA M U N I C I P A L I T I E S

ORGANIZED 1897

— OFFICERS —

President	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-	-	(City Attorney of Napa)	-	-	WALLACE RUTHERFORD
Second Vice-President	-	-	-	(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON				Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Corcoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 8

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA
JOHN H. RUSSELL, PH. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON
N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

AUGUST, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

First Annual Report of the City Planning Commission of San Anselmo

INTRODUCTION.

The name "City Planning" is in general a greatly misunderstood term. Many think it is nothing but the theory of a few people whose sole idea is the drawing of maps and plans for something which exists only in their own minds, but those who have made a study of the subject know that it is one of the most important features that can be undertaken by the citizens of a community towards its upbuilding and general welfare.

We have been shown the advantages of careful and scientific planning in European cities. Communities have become prosperous there by looking ahead and planning towards better system and order, but in general the American city has been content to go ahead without any thought of the future.

Business men can adopt no better method to show their interest in the community than by making a careful study of and doing what they can to arouse the interest of everyone in city planning. It is not so much the few members on a City Planning Commission that can accomplish things, but it is the interested public who can come to the meetings and suggest ideas.

We are endeavoring to arouse the interest of the public as those who are giving their time and energy towards the work can accomplish little without sufficient appropriation. In the case of our own town, the appropriation made last year would seem ample and it perhaps would enable us to accomplish considerable, but it has practically all gone towards the draughting of a basic map of the town, something which has been needed by the town for a long time and which is the first essential towards mak-

ing a plan and civic survey of the town. After this is completed, we can hope with similar or better appropriations to accomplish many things. At present we can act only as an advisory committee to the Board of Trustees and make such suggestions and recommendations as may be threshed out from time to time in our meetings. Towards this end we ask the co-operation of our townspeople and their attendance at our meetings. Bring your complaints or recommendations there and have them threshed out and arranged for proper presentation to the Board of Trustees, thus saving them time at their meetings.

Our problem is the housing of the city worker. We must endeavor to keep all the natural beauties of our country intact, making it attractive to those who work all day in the city, and in addition give them all the modern conveniences that can be had in the larger cities and which they are used to. There must be no congestion and the natural attractiveness of our trees and gardens must be conserved.

The town of San Anselmo has been laid out in separate tracts from time to time by people of diverse tastes and ideas, without any thought of how they would connect up and form into a town. The result is that we have a perfect maze of streets and lanes zigzagging over the town. Just imagine the money that could have been saved and the enhanced values our properties would have if Planning Boards had been in existence years ago to supervise the laying out of tracts with some little thought of the future. However, the step has now been taken and it is better late than never to start the town in the right direction.

We have an excellent system of fire protection and with the addition of our new motor-driven apparatus, we are second to none; but when we have our maps complete there will no doubt show up opportunities for the improvement of the location of some of the units of the system.

San Anselmo has not the problem faced by larger cities, that of proper housing and relief of congestion. We have lots of room and we want to keep

it so, and go ahead with our general plan of improvement.

It is perhaps unknown to many that the authority of City Planning Commissions extends outside of their respective town limits to the extent of three miles distant. This gives them control of conditions which might at some future date come within their jurisdiction by annexation or otherwise. It also gives the surrounding sections the benefits of a Planning Board without expense to themselves, as their problems will be willingly looked into as well as those of their own city or town.

Garbage disposal has become quite a problem throughout this valley and this Commission hopes to be of assistance to the several communities in handling the situation.

Suggestions for betterments will be gladly received at any time and anything in the possession of our residents that might prove of any interest to this Commission, will be gladly received and properly taken care of. Pictures, maps, curios, etc., especially of former days, are especially welcome.

Our aim is to arouse interest in our work and the hearty co-operation of everyone interested in the welfare of San Anselmo.

Attendance at our meetings will be appreciated.

There must be progress, and in its march private interests must ever give way to the welfare of the community.

It may seem harsh, and usually is, for some individual to sacrifice his holdings to which he is attached by sentiment, but there is imperative need for improvement and where powers are not used arbitrarily, they always work towards a good end.

The following is devoted to a review of the work done by this Commission during its first year and recommendations for the consideration of the Board of Trustees made as a result of their study of the conditions existing in the Town of San Anselmo.

TOWN MAP.

The first matter considered by the Commission was the preparation of a basic map of the town and practically all of their budget allowance for the

first fiscal year has been expended on this map. The map is now, in the words of our Town Engineer, "about ninety per cent completed," so far as the picture of the town is concerned, and we know that when you look it over and see the amount of work entailed and realize the great benefit and convenience it will prove to be to the Board of Trustees and to the town in general, you will agree that it is money well spent. The job entailed, besides the draughting work, the making of a brief abstract of every piece of property in the town, which abstract is in the hands of the Town Engineer and will prove of vast help to him and to the Assessor in future work.

The map now needs in order to make it a complete record, the insertion of all street grades established, the locations and depths of all sewer pipes, water pipes, gas mains, and the location of the poles and wires of the telephone and electric light companies and also a record of the condition of the streets and sidewalks throughout the town, so that when the Board of Trustees look at the map they can see at a glance just what the conditions existing in the several parts of the town are. We might mention also that one map will show the lighting system of streets and the location of the alarm boxes and hydrants in our fire fighting system. With the idea of completing the map by making these additional features show upon it, the Commission hopes that the Trustees will see fit to make enough allowance in next year's budget to complete the work in every essential.

A matter of vital importance both for safety and convenience is the widening and rounding of some of our corners.

The first one we will take up is the corner where San Anselmo Avenue turns into what was formerly known as Kohn Road. Enough land should be purchased to allow of a turn on this corner of not less than a thirty foot radius. Accidents have already occurred here and more will surely follow if it is not remedied at once; so your urgent action is requested at this point. The recent town election has retired the former committee appointed on this

work, so we suggest the appointment of another in its place at your first meeting.

We had in view the recommending of the cutting down of several streets at this point, but we are glad to see that we have been forestalled and the work already accomplished.

There are two bad turns on the Canyon Road (formerly Redwood Avenue), in the Bush Tract, making it almost impossible to get on or off the road in an automobile. The turns at both ends of the road should be widened out if possible enough to enable the fire truck to make the turns.

This Commission recommends that San Anselmo Avenue from the corner of the Shadburne property be straightened out by running closer to the creek, moving the light pole on the corner to correspond and allowing room along the creek bank for a sidewalk.

This curve is perhaps the most dangerous of all, due to the heavy traffic coming from four directions at this point. The only cost entailed would be the grading and macadamizing of the additional roadway caused by straightening out the street.

CIVIC CENTER.

No town is complete without a presentable and roomy Civic Center, with its Community Hall for dances, entertainments, mass meetings, concerts, etc., and in conjunction with it an open-air dance pavilion, which is always a great attraction and means of income in any country town. There should be a garden, paths, music stand with benches, and public conveniences.

Towards the accomplishment of this feature we suggest the acquisition of the land in the rear of the Town Hall comprising Lots 3, 4, 5 and 6 of the Linda Vista Tract, being the full width of the present holdings of the town and running back as far as the Linda Vista Creek. We estimate that this would cost at the present time about \$10,000, but land is steadily increasing in value in this section and this estimate would have to be increased as time goes on.

For the present we recommend the removal of the eucalyptus trees along the creek while it is possible to do so

without any trouble or danger in felling, and the trimming of the lower branches in the creek trees to allow of an unobstructed view across the creek and give it a neater and cleaner appearance. This creek is one of our town's greatest assets and every endeavor should be made to keep it clean and attractive.

Electroliers along San Anselmo Avenue from Bolinas Avenue to the turn north of the Town Hall would be a splendid addition to this street and the night appearance of the town, as well as a help to the business section. We understand there is a petition before the Board on this same matter and urge your hearty co-operation with the petitioners.

RECREATION FIELD.

There is a growing tendency in the people of today to underestimate the value of physical development. We are going backwards instead of ahead in this respect. Running the streets is no place for the growing child. There should be playgrounds with full athletic equipment, tennis courts, ball fields, bowling greens, running track, swimming tanks and all diversions that both young and old can enjoy. Physical culture is absolutely necessary for health and enjoyment and we should not let any opportunity slip by whereby the town could acquire sufficient ground to enable them to have a modern, up-to-date recreation field.

There should be at least six or seven acres, and more if possible should be acquired or bonded. Land will never be any cheaper than it is now and it would be well to consider this matter if a bond issue is called. We recommend as a great asset to a field of this kind, proximity to the public schools.

Several sites have been considered by this Commission and discussed in their meetings, and we thought it advisable to list them all in this report. We would be glad at any time to co-operate with the Trustees in this matter and agree on which site would be most suitable. (Then follows a list of the sites suggested.)

CEDAR STREET EXTENSION.

A matter that has been brought up before without success, although which

is an urgent necessity, is the extension of Cedar Street. The Board should not let the protest of a very few property owners stand in the way of a work that will prove so very beneficial to the whole town. We recommend the ultimate extension from Rose Avenue through to Grove Lane, where it intersects San Rafael Avenue, but we consider it of immediate necessity to go as far as Magnolia Avenue. The business section is centering more and more in the vicinity of the Town Hall and this road offers the most feasible outlet into the residence section from there. The balance of Tunstead Avenue should be improved under the "Improvement Act of 1911," but this is not advisable unless Cedar Street is extended, as the travel would not warrant the expenditure. Tunstead Avenue is one of our widest and best streets but stands almost unused and the property fronting on it standing idle because it runs to a "blind."

We therefore urge you to renew the proceedings started heretofore, which through lack of foresight on both the Commission and the Trustees were allowed to drop.

YOLANDA STATION.

We have a condition at Yolanda Station that could be immensely improved by acquiring a portion or all of Lot No. 101 of the Bush Tract and also a piece north of the track from the Yolanda Court property. There is need of more landing space for automobiles and teams meeting the trains. Roomy approaches to a town always give the stranger and prospective buyer in the town a much better impression than crowded and inconvenient landing places.

LANSDALE STATION.

We have a similar and worse condition at Lansdale Station due to the proximity of the creek at this point, and it would be impossible to improve the situation without removing the building now being occupied as a grocery store just north of the station. This would undoubtedly prove quite an undertaking, but it would be well worth any endeavors in that direction. At present both Yolanda and Lansdale are danger-

ous stations, due to the road crossings and congestion of traffic and confusion of passengers getting on and off trains will some day cause a serious accident unless the situation is remedied. The increase in growth and population will make these conditions worse as time goes on. The Yolanda situation could be easily remedied now before it is built up and we recommend the immediate action of the Board at this point and due consideration of the Lansdale situation.

SIDEWALKS.

We recommend that sidewalks be constructed along San Anselmo Avenue throughout its entire length, where not already installed by owners, under the "Improvement Act of 1911." The same action should be taken on the San Rafael and Olema Road from Sequoia Park to the station.

The traffic on both these roads is very heavy and pedestrians have to use the streets where there are no sidewalks, making travel exceedingly dangerous. Jitney buses run on these streets now and one serious accident has been caused by confusion of traffic with people walking. This means no expense to the town and proceedings should be started at once. Those who have built sidewalks already should be encouraged by the town making others do the same.

STREET NAMING.

Some time ago there was a committee appointed to rename several of the streets of the town where duplicate names appeared. This committee rendered their report and their recommendations were approved by the town. We find, however, since we have an up-to-date map of the town, which was not available to this committee, that there are still many duplicates.

Such complications and jumbling of street names should be entirely eliminated in future and would have been almost entirely so in the past if the owners who place subdivisions on the market would have their maps recorded. The Board should take some steps to force such owners to file their maps, by refusing them such benefits as street lighting, sprinkling and other conveniences

until they have complied with the law. Unrecorded maps are one of the most annoying things that confront town officials in their work and double the duties of the Engineer and Assessor.

Street signs could also be taken up at the same time. Our system of streets is so very complicated that it is almost impossible to properly direct the stranger, without some guide posts.

TREE PLANTING.

A systematic plan of tree planting should be adopted and property owners requested to comply as nearly as possible to the plans set out by the Trustees. No doubt the Woman's Improvement Club would take this matter up, as it would be right along the line of their work.

A tree suited to this locality that makes a desirable sidewalk ornament should be selected and recommended to all owners. A certain distance between trees should be agreed on, so as to give uniformity.

PUBLIC RESTING PLACES.

A matter that is overlooked in the average small town and which we are even prone to ignore in the larger cities is the need of public resting places and places of public convenience. One should be in the neighborhood of the Civic Center and one near each station in the town. The railroad company would no doubt help along these lines.

Drinking fountains should be installed at several convenient places in the town.

REMARKS.

We have endeavored in the foregoing report to make none but practical suggestions or recommendations, keeping away from the theoretical ideas, held by many City Planning Experts. It is almost impossible in so short a time to get much idea of what is needed by a town in view of its future growth, but from time to time ideas come to us individually of some great good that could be accomplished by improving along certain lines and developing with a fixed idea in view. In this way we hope to supplement this report from time to time, providing the Board of

Trustees sees fit to keep the Commission in existence, and if the report is kept before the Board at all times, it will prove a guide to them in their work and give newly elected members an idea of what the town needs, and what the former Boards were trying to accomplish.

We hope that every one will read this report and if they have different views to ours on any of the subjects mentioned we would be glad to hear from them, and as we have said before, we solicit

attendance at our meetings and welcome suggestions at any time that might work toward the betterment of existing conditions or that might help us to solve problems that will confront us in the future.

Respectfully submitted by the

SAN ANSELMO CITY PLANNING
COMMISSION,

ARTHUR W. STUDLEY,
Secretary.

How One California City Dealt With Its Unemployed

By FREDERICK C. MILLS, Assistant in Economics, University of California

(Written expressly for Pacific Municipalities.)

EDITOR'S NOTE—The writer's knowledge is obtained from first hand, he having been called to San Jose to serve as Director of Shelter and Employment while the work was being organized.

The problem of unemployment which San Jose faces annually during the winter and early spring months is, in its essential features, that with which every city in California has to cope. It is a double-edged problem. On the one hand there is the local unemployment due to the seasonal character of the industries of the various regions, and on the other the question of the migratory class, workers and non-workers, who form a distinctive feature of California's unemployed armies. The former is especially marked in San Jose, which, having but a trifle over 30,000 people within its limits, is the center of the Santa Clara Valley fruit region, with more than 90,000 inhabitants, a major portion of whom are engaged in agricultural or closely allied occupations. As concerns the other phase of the problem, San Jose suffers an intensification of its normal troubles. It is on the "Coast Route" from San Francisco to the southern part of the State, one of the two main channels of migratory travel, and the incessant streams of unemployed workers and vagrants flow north and south through this city, an endless current, sullenly swollen in the winter months. Every year the double call comes; the charity organizations of the community are strained to the breaking point;

there is back-door begging and petty thieving over all the district; and with all the disunited efforts of the various organizations and individuals poverty and mendicancy persist, only partially alleviated. In the winter of 1913-14 San Francisco's indiscriminate doling out of food to all who applied partially lifted San Jose's troubles from her shoulders. The winter of 1914-15 was marked by considerable distress. That of 1915-16 bade fair to mark a repetition of the conditions of the preceding years, for the war-boom which had spread cumulatively throughout the industries of the eastern part of the country could not immediately lessen the amount of unemployment in California, with its dominating seasonal industries.

With this problem facing the city, members of the California Civic League called a mass meeting of citizens for the consideration of ways and means of coping with it. Out of several of these meetings grew the Joint Committee on Unemployment, a body notable for the diversity of the elements actively represented on it. The City Council, the four leading women's clubs of the community, the Hebrew Benevolent Society, the Building Trades Council, the Building Trades Employers' Association, the Rotary Club, the Merchants'

Association, the Catholic Federation, the Pastors' Union, and the Chamber of Commerce elected members to sit on this representative committee. Out of this apparently heterogeneous mass was welded a homogeneous, harmoniously working body. Upon the recommendation of this committee the City Council created the position of Director of Shelter and Employment for the city, the salary to be paid by the municipality as its contribution to the cause. For the securing of the additional funds needed, four sub-committees on finance to deal respectively with business men, fraternal societies, women's clubs, and religious organizations were appointed and given definite sums for which to work, and the County Board of Supervisors was petitioned for a monthly contribution. The requisite amount was ultimately over-subscribed. As a further measure for the strengthening of the community's powers to meet the winter destitution a conference between the chief relief agencies of the city and the Committee on Unemployment was held, and a definite division of function decided upon.

With the preliminary organization perfected, a program of action was formulated and put into operation. Primary emphasis was placed on the problem of local unemployment, and the first steps were aimed at the relief of that situation. A municipal employment bureau, with department for men and women, was opened on December 10, 1915, in the City Hall. Under the direction of the Collegiate Alumnae Association, a house-to-house canvass, in which over 7,000 residences were visited, was conducted, in an attempt to induce householders to improve their premises during the winter months, and to familiarize them with the new municipal bureau. Some 700 of these promised to employ men or women for jobs of varying length, and though some of these promises failed to materialize, the canvass proved to have been decidedly worth while. Calls for skilled help coming in to the bureau were filled through the Labor Council from among unemployed union workers, when such were available. The remainder were filled at the

municipal bureau from among the resident unemployed men and women who were registered. During the first five months of its operation there were registered at this office 876 resident men and 282 resident women, 1158 in all. There were filled, during this five-month period, 1098 positions, of which 887 were temporary and 211 offered permanent opportunities. At the close of the period for which the office had been established the City Council voted to continue it, its maintenance being provided for out of city funds.

As a further step for the mitigation of distress among resident workers a campaign was conducted among all employers of labor in Santa Clara County, urging the continuation of as much regular work as possible during the winter months, the carrying on of special work where possible, and, if there was an inevitable slackening of work, the retention of the entire force of employees on part time in preference to the employment of but a part of the force on full time. The suggestions were endorsed by the principal organizations of employers and workers in the community, and the campaign was carried on through the mails, the daily press, and, most effectively, by a special committee of employers. Some of the larger manufacturing firms which suffered a winter slack definitely adopted the latter policy. Similar requests were made in regard to public work, in order to prevent any unnecessary falling-off in such employment.

The problem of caring for the transients formed a distinct question. The giving of jobs to them through the municipal bureau was not deemed feasible, the needs of the local situation having to be first considered. The creation of work at wages meant, under the existing methods of relief throughout the State, an influx of migratories to San Jose. The "work test," with all its faults, had to be applied in one form or another.

The question of lodging was settled through the securing of a vacant rooming house, which was rented for a period of three and one-half months. Bunks providing sleeping quarters for 84 men

were installed, and a kitchen and dining room fixed up. Practically all the labor for this work was donated by members of the local trade unions. Hot showers, a fumigating room, a barber's chair, shoe-making tools, and a fireplace for the all-important "boiling-up" were added. Straw mattresses, blankets, sheets, pillow-slips, night-gowns, and individual towels were supplied. Any man calling at the "Lodge" before 1 P. M. could, by working four hours, secure three meals and a bed for the night. Bathing and the surrender of clothing for fumigation were compulsory. A clean pair of socks was given to each man, and many of them were, in addition, fitted out with clean underwear and such outer clothing as was badly needed. All those who had worked four hours were given a shave and a hair-cut, if these were desired. Pressure upon the facilities of the "Lodge" was such that three days had to be set as the maximum length of stay, though this was extended where necessary or possible.

The work to which the men were put was varied. Road sweeping gangs, which cleaned the streets, vacant lots, and alleys in the various districts of the city, were organized, each superintended by one of the city's regular street-sweepers. Other gangs were each day sent out to the municipal park, where land was cleared and roads built. A small amount of tree planting was carried on, the Outdoor Art League furnishing the trees and the superintendence.

A pecuniary valuation of the work done in and about San Jose by the men during the winter is not possible, but the major portion of it was productive, useful work.

The "Lodge" was closed on April 1, 1916, when the stress of winter destitution was about over, and work was starting up again in the surrounding country. During the three and one-half months for which it operated 1377 men, of whom 858 stayed through their full period, were accommodated, 3547 beds being supplied and 10,804 meals served. Arrests for vagrancy, which are usually rather numerous in the winter months, fell far below normal. Street begging and back-door begging were virtually eliminated, not only in San Jose but throughout a considerable part of the outlying country.

In the carrying through of this program the committee in charge realized the essential superficiality of many of the remedies which were applied. A "Lodge," a work test, a mere three days' respite from the harrowing coldness of a migratory existence are not solutions of the problem of unemployment. But at least the rigor of the situation was tempered, and a step was taken toward a more complete solution. And not the least of the gains from the winter's work was that community education which comes from the co-operative grappling with a social problem, and which is essential to the accomplishment of more thorough-going reforms.

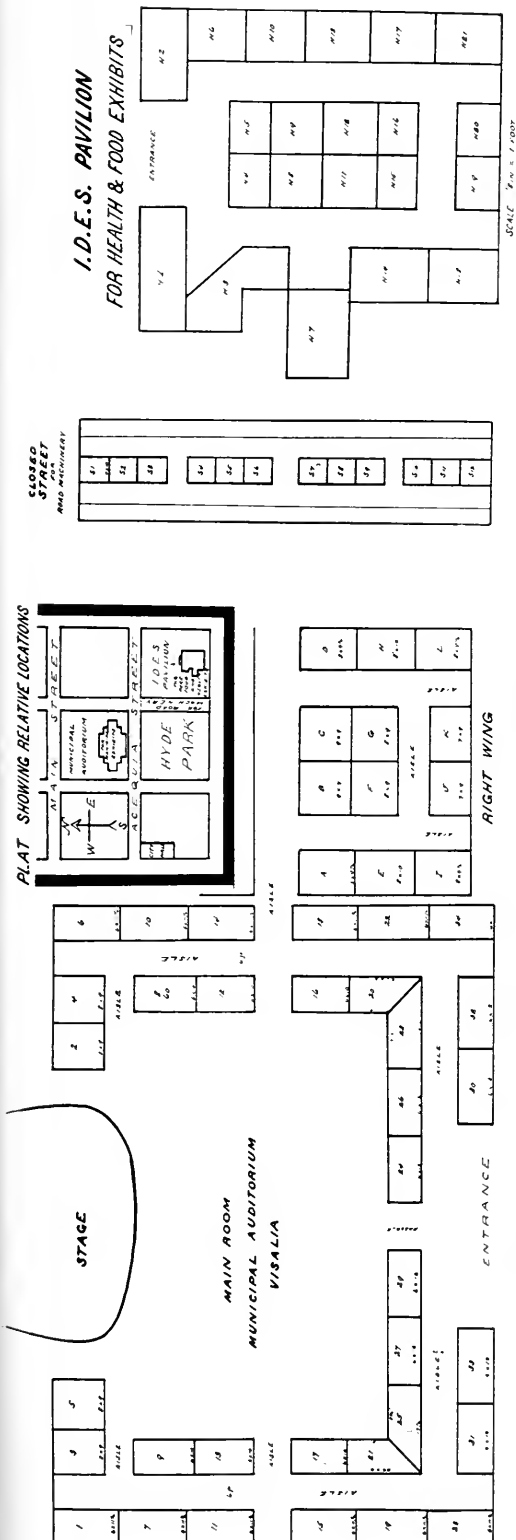


Plans for the Visalia Meeting

The annexed sketch shows a plan of the municipal auditorium and the I. D. E. S. Pavilion at Visalia, as they will be subdivided for exhibition purposes at the municipal convention to be held in that city October 10th to the 15th. The meetings of the entire body will be held in the main room of the auditorium, the spaces reserved for municipal exhibits being located under the balcony and in the right wing of that building. The I. D. E. S. Pavilion will be reserved for the Health and Pure Food Exposition to be conducted under the supervision of the State Board of Health and Prof. M. E. Jaffa, State Nutrition Expert, while the street between the auditorium and pavilion will be reserved for exhibits of road machinery such as rollers, scarifiers, sprinkling carts, etc.

The main room will also be used for meetings of the engineers, councilmen and street superintendents, while the departments of city attorneys, and clerks, auditors and assessors will use two smaller rooms located in the left wing of the auditorium. At a meeting held recently in San Francisco by one of the organizations interested in the improvement of housing conditions, they decided to hold their next meeting at Visalia with the League of Municipalities, and plans for an elaborate educational exhibit in connection therewith are now under consideration by the State Commission of Immigration and Housing.

The meetings of the Department of Public Health will be held under the trees in Hyde Park, with the council chambers in the city hall in reserve in case of bad weather.



Report of Mr. Lockwood, City Manager, San Diego Over Certain Departments

The attached reports will give some idea of what has been attempted in the Operating Department, the object being, as explained in one of the reports, to try to give accurate information to the people of San Diego as to what was being done.

One of the first steps undertaken was to try to keep an accurate account of every cent of money expended in this department. In doing this two difficulties were encountered. First, it was impossible to get the amount of outstanding indebtedness, and second, charges were being made and are still being made against the funds supposed to be handled by the Manager of Operation, entirely without his knowledge, to say nothing of his consent.

An account is being carried on the books as a "capital account" wherein a record is kept of all expenditures which can be credited as assets, such as the laying of new mains, extension of sewers, etc.

One of the first things insisted upon by this department was that requisitions should come through in such a way as to give the Auditor an estimated value of the proposed indebtedness to be incurred. This met with strenuous objection on the part of the Purchasing Department, and a letter from them stating the fact that it was practically none of our business what the costs were, and they even objected to our getting prices of any description, stating that that was their function, and that the Operating Department was organized for a different object.

After meeting with several difficulties, the Operating Department has at last checked up all the material on hand in the yards and storehouse, the total value of this material aggregating something in the neighborhood of \$100,000, and the Purchasing Department is now making

strenuous efforts to compel the Operating Department to turn over all this material to them, and in fact have even gone to the extreme of insisting that they do all the repairing of automobiles, etc.

The attached reports will show the decrease in expenditures in the various departments since they have been under the control of the Manager of Operation. Roughly speaking, if the city had been allowed to continue to operate as it did during the first four months of the year the cost of operating would have been somewhere in the neighborhood of \$750,000 or \$800,000, and if the month of April was taken as a fair criterion, it would have been somewhere over one million of dollars, while taking it for the last three months, the present cost of operating these various departments should run about \$600,000. This taking into consideration charges which have been made against these funds for material and supplies delivered during the first six months of the year, and with which the Manager has nothing to do.

The Operating Department is not yet on a thoroughly efficient basis; simply the high places having been taken off but even under the scheme as at present we can safely say there is a saving to the city of at least \$150,000 per year.

EFFICIENCY AS APPLIED TO CITY WORK.

Efficiency might be defined as the "largest amount of return for the minimum amount of expenditure."

In city work the amount of expenditure is generally fixed, and the problem resolves itself into obtaining the maximum amount of work from this given expenditure.

There is always room for improvement in the Street Department, Water System, Sewer System, etc., and only a limited amount of money to make the needed improvements with, so this money must be stretched to cover as much ground as possible.

In private work, on the other hand, the amount of work to be accomplished is generally determined beforehand, and the question is to reduce the cost of this work to the least possible amount.

The expenditures of the city for this year are theoretically limited by a budget. The Manager of Operation took charge of the departments under his care so late in this year that it was a physical impossibility to carry on the work with the amounts allowed in the budget after deducting what had been spent before he took charge. If one-half of the budget allowance could have been given the Manager to run the departments under his care during the last six months of the year the problem would have been practically easy, but over one-half of the budget allowance was spent in the first four months, and a proportionate amount in the next two months, therefore comparatively little money was left to run these branches of the city government during the last half of the year. As an example of what has been accomplished in the line of efficiency, the following statement regarding the making out of water department bills will perhaps serve.

In the two parallel columns are given the number of men required to perform this work in April and the number of men required to perform this work in July, practically the same amount of work being done each month, excepting that there might have been a slight increase in July over April.

APRIL.

5 Meter Readers
4 Bill and Ledger Clerks
1 Cashier
2 Assistant Cashiers

—
12 Total

JULY.

2 Meter Readers
2 Bill and Ledger Clerks
1 Cashier
1 Assistant Cashier

—
6 Total

It is not the object of the Manager of Operation to cut the pay roll more than is absolutely necessary, but rather to keep as many men at work as possible, but where there is no money to pay for labor the labor can not be employed.

NEWSPAPERS.

It would not be out of place in this report to make a statement regarding the attitude of the newspapers toward this new experiment in city government in the city of San Diego.

The papers have all exhibited a spirit of fairness, and a seeming desire to acquaint themselves with the facts, and publish statements accordingly. Perhaps in one or two instances a reporter has not let facts stand in the way of making a good story, but these instances have simply been stories, a little on the grand stand order, perhaps, and doing no particular harm, although sometimes recounting things which have never happened.

The Motor Vehicle Act and Municipalities

A careful reading of the Motor Vehicle Act of 1915 (Stats. 1915, p. 397), discloses the fact that the act contains many interesting and important provisions concerning which many city officials appear to know very little about. Section 22 of the act, referring to the matter of speed, limits the speed in territory "closely-built up" to twenty miles an hour and in a "business district" to fifteen miles an hour. Section 1, which is devoted entirely to a definition of the various terms used in the act, defines a "business district" to be

territory devoted mainly to business, at the boundaries of which the city council has placed signs reading "Business District—Slow Down to 15 Miles an Hour," with an arrow pointing in the direction of the district. The words "closely-built up" defines a district wherein the speed limit is twenty miles an hour and in which case the city council has also erected the required signs.

The language of the act indicates that a lawful conviction for violating the speed limit prescribed could not be obtained unless the signs referred to had

been set up by the local authorities, a view which is supported by an unofficial opinion from the Attorney-General's office.

Section 20 requires vehicles to be operated with caution in passing any railway or street car and, if necessary, to be brought to a full stop. Several cities have passed ordinances requiring vehicles to come to a full stop in every case, but the authority to enforce such a requirement is doubtful in view of the fact that subdivision (d) of Section 22 provides that limitations as to speed are exclusive and that local authorities shall have no power to make any other provisions in conflict with the act.

Another interesting provision is found in subdivision (c) of Section 23 which authorizes the court to suspend an operator's or chauffeur's license for thirty days. However, the provision of

special interest to municipalities is contained in Section 35, which provides that all fines collected by municipal officers must be paid into the county treasury, subsequently to be refunded to the cities and towns of the county quarterly, in proportion to their population.

The method to be pursued in making arrests is another matter of importance. It is found in Section 22(c), and requires a definite procedure on the part of the arresting officer in order to make the arrest legal.

It would be advisable for all city and town officials to see that the signs required under the act are erected immediately, otherwise they are likely to encounter more or less trouble in securing convictions for violating the provisions relative to speed. The following is a synopsis of the act, together with a suitable form for the notice required to be used by the arresting officer.

ELIMINATING BILLBOARDS

By ED. H. McCUISTION

Mayor of Paris, Texas. President of the League of Texas Municipalities.

For years to come when the question of regulating billboards arises in any community the thoughtful will turn instinctively almost to the case of *Gunning Advertising Company v. The City of St. Louis* (137 S. W. R., 129). This case constitutes a judicial landmark, and upon it as authority, ordinances in progressive cities throughout the Nation will be based very largely for many years to come. It was from this case as a source of inspiration that the writer gathered his first real hope of successfully regulating billboard advertising. An ordinance was promptly prepared along regulatory lines, as it was plainly evident even from the strong Missouri case that the business of bill posting was not of itself such a nuisance as could be absolutely prohibited. That ordinance contained substantially the following outline of features:

1. It provided for the selection of an official billposter who, it was provided would be nominated by the Mayor after due advertisement had been made for sealed bids to be submitted by those

wishing to pursue this method of advertising as a business, and the person submitting the highest and best bid or offering to pay most liberally for the privilege was, other qualifications being equal, nominated by the Mayor and confirmed by the council, as the official billposter.

2. The nominee was required to execute a bond in the sum of \$500 for the faithful performance of all the duties of his office as imposed by the provisions and requirements of the ordinance.

3. All other persons were forbidden to engage in the business of posting bills, tacking signs or doing open air advertising by means of billboards or other structures serving a like purpose.

4. Billboards were required to be five feet from the inside line of every sidewalk and no fence or other structure, including the walls of buildings within five feet of the walk, were to be used as a billboard. All billposters were forbidden to use the sidewalks or streets while posting bills or tacking advertising matter. All billboards used

were to be securely and firmly fixed to the ground by means of braces and otherwise so as to render them substantial, and were also forbidden to be of greater height than twelve feet and in no event to be used until they had been inspected and pronounced safe and constructed in accordance with all the specifications of the ordinance.

5. The official billposter was required, either in person or by deputies, to make frequent examinations of billboards and all structures used as such to see that they were kept in a safe condition. He was also required to strip his boards from time to time with such frequency as would prevent them from at any time appearing unsightly. He was required also to keep on file with the city secretary a list of all billboards and structures used by him or his agents for outdoor advertising that strict police surveillance might be maintained from time to time. He was likewise forbidden to tack, affix or otherwise display any indecent matter of any character upon billboards or structures used as such within the city.

6. Maximum charges and fees were prescribed by ordinance, and also penalties for its violation.

The larger companies which had been making a business of outdoor advertising, and especially of that branch of it commonly known as bill posting, were greatly aggrieved at the ordinance which had been passed in Paris and promptly sought means to test its validity. They purposely violated it, arranging with an agent to do so. He was immediately arrested, and, upon refusing to give bond, was accordingly placed in the city jail. Habeas corpus proceedings were at once sued out by an attorney of the advertising companies in the Court of Criminal Appeals. Thus the matter was brought up for a speedy review, and in an opinion rendered by Judge Prendergast, entitled *Ex parte Savage* (which is to be found in 141 S. W. R., 244), the ordinance in question was sustained on all grounds except the one pertaining to the selection of official billposter. The court held that under the charter, notwithstanding the city of Paris elected its treasurer by that method, no authority or charter power was given to select any other

officer by that same method or upon that basis. For this reason alone *Savage*, the defendant, was discharged. Immediately after the status established by this decision our ordinance was amended so as to comply with its provisions and made stronger and far more efficient in other particulars.

Under the terms of the ordinance now in use the Mayor simply designates one of the policemen as official billposter and imposes upon him the duty of inspecting all billboards and all advertising matter of every kind and character offered for display upon the prescribed boards.

With the greater freedom and more definite assurances now given by the Texas courts, as evidenced by the opinion in the *Savage* case as above referred to, there is no reason why Texas cities of every class should not take higher ground on the question of regulating bill posting. As conventionally practiced heretofore, it has been a real nuisance and positively offensive to good taste and repulsive to discriminating civic ideals. Nearly, if not all, of the cities throughout the country, both large and small, have suffered long and patiently under the blight and hindrance of this evil, in most instances indulging no hope of ever being able to free themselves from it. But now, fortified in the strength and legal security evinced in both the *Gunning* case from the Supreme Court of Missouri and the *Savage* case from the Court of Criminal Appeals in Texas, nothing but civic enterprise and progressive momentum is necessary upon the part of any city in an undertaking of this character.

No individual can do his best work in the midst of an untoward or unwholesome environment. The same is true of cities; the individuals so largely composing them are all creatures of environment to a degree that few are willing to admit. Cities must learn the lesson of being individualistic. I cannot now recall any one feature of general civic attractiveness which it seems to me is so easily within the reach of every city as this one of practically abolishing the billboard. No investment is required. Only the necessary legislative power to pass a good, sensible, workable ordinance and then see that it is efficiently enforced.

Progressive Cities Adopt Modern Street Lighting Systems

By FRED W. REA

In these modern times the growth of towns, increasing complexity of street traffic, the fast street cars, and automobiles have all combined to make scientifically correct street lighting a necessity. The time was when any light was all right and many cities, desiring better lighting on their main thoroughfares, installed systems that were an eye-sore at night because of their exceeding brilliancy. In modern installations this eye-destroying glare or flicker is done away with and a soft but yet brilliant light is obtained. The lamps can be so mounted to obtain a uniform amount of light on the street, illuminate the facade of each building and make the streets attractive as well in the day as in the night.

Every city in the world will eventually improve their present lighting system, for ornamental street lighting is an actual money-maker. Money put into good street lighting is not money spent—it is money invested, and will pay dividends every day in the year, winter or summer. People from "dark" towns prefer to promenade well-lighted thoroughfares because the stimulation of light is so pleasant. And, too, loyalty and civic pride are created by good street lighting. As a burglar insurance, Inspector Faurot of the N. Y. Police Dept. said recently: "Electricity is diminishing crime in all American cities. An Electric Light is nearly as good as a policeman."

Some cities of the Pacific Coast have already felt the great benefits derived from good lighting. One of the most

recent installations of highway lighting was on the highway between Chico and Red Bluff, Cal.



Three of these globes mounted in triangle will make up the unit to be used on Market Street, San Francisco

The installations as put in represented a new departure on the Coast and made a very favorable impression with State Highway engineers and others who had seen it. The lighting units used were the new type General Electric luminous arc lamps equipped with prismatic refractors and high efficiency electrodes and were developed especially for roadway lighting. Long tests have proven that by combining the energy of several smaller candle power lamps in one large lamp and spacing them farther apart, better

ing of Salt Lake City's business section. Each standard is equipped with three 6.6 amp. lamps. The poles are of a special design, 27 feet high, and highly decorative. The units will be placed 100 feet apart and opposite each other. The degree of light obtained will be of a highly illuminating character and yet most pleasing to the eye.

The first installation of combination "white way" and highway lighting in California was recently made at Gilroy, Cal. Here the high efficiency luminous arc lamps dot the highway entrance to



On the highway near Chico, Cal.

lighting is obtained. The result is a silhouette in the roadway due to the large light source behind them and the wide angle of distribution of the lamps.

Thirteen powerful electric arcs, the latest achievement in electric arc, turn dark nights into days on the new Marysville Bridge. The poles and globes used are of a simple but very attractive design and are greatly admired by tourists and Marysville's progressive citizens.

The ornamental type luminous arc lamp is the lamp to be used in the light-

the city and the business section is lighted with the ornamental single standard type. This installation has proven to be a big asset to this progressive city and is one that should be seen by every one interested in modern street and highway lighting. A city lighted as Gilroy is, is bound to impress the tourist.

On or about September fifteenth, Market Street, San Francisco, will blaze forth in her new "Path of Gold." This system was designed by Walter D'Arcy Ryan at the request of the

Downtown Merchants Association. Fifteen business blocks on the south side of Market Street and thirteen blocks on the north side comprise the "white way" area. The Ferry Building Plaza, Ferry Tower and New Montgomery Street are also included in the new system. A decorative top piece designed by Willis Polk, architect, and executed by Leo Lentelli, sculptor, carrying three lamps, will replace the present single arc lamp on each ornamental trolley pole. The standard will be 32 feet in height and the average distance between poles 110 feet. The General Electric Co. luminous arc lamps, which were so largely responsible for the successful lighting of the Exposition, will be used, operated at 6.6 amperes. The new sectional globe to be used is of a special glassware and will render a beautiful soft light that will be very pleasing. There will be 411 lamps on Market Street, 18 lamps in front of the Ferry Building, and 10 lamps on New Montgomery Street, making a total of 439 lamps. The expense of the installation will be borne by the Pacific Gas & Electric Company and the operating expense will be shared by the City of San Francisco, United Railroads, Downtown Merchants, property owners and others.

The beauty, dignity and efficiency of this "Path of Gold" will be of great advertising value to San Francisco and be instrumental in creating desire in other cities to install like systems. Not only will the surface of the streets and sidewalks be illuminated, but also the facade of each building to its skyline, figuratively filling the street with light.

Plans have already been made to light the business triangle district of San Francisco, bounded by Powell, Post and Market Streets. The standard to be used is somewhat similar to the Market Street standard, but only 18½ feet in height. The center light will be an ornamental luminous arc lamp of the Market Street type, and the two side lamps will be incandescent bracket type. The luminous arc lamp is to be operated at 6.6 amperes until midnight. This lamp will be maintained by the Merchants. The two incandescent

lamps, operated as all night lamps, will be maintained by the City. This new standard will replace the present five-light cluster and will be much more ornamental and distinctive.

Plans are also under way now to light the Civic Center and Union Square. With all these new installations of such highly decorative character, San Francisco will be the best lighted city in the world.

NO JOINT SESSIONS WITH THE CITY PLANNING CONFERENCE

According to a circular letter issued by the California Conference on City Planning, that body will hold its next conference at Visalia at the same time as the meeting of the League of California Municipalities. However, in accordance with the expressed wish of a great majority of the delegates who attended the convention last year in Oakland, the meetings will be entirely separate and distinct, and the league will not hold any joint meetings at Visalia with the City Planning Conference unless it should be otherwise determined by the delegates in attendance.

FINE SYSTEM.

First Councilman — "Here's a fine-looking street."

Second Ditto — "You're right. What's the best thing to do with it?"

"Let's have it dug up for a sewer."

"But wouldn't it be proper to pave it first?"

"Of course; I thought you would understand that. Then, after it is paved and a drain put in, we'll have it repaved."

"All in readiness to be dug up again for the gas pipe? I see you understand the principles of municipal economy. And after we have had it repaved for the second time, then what?"

"Well, then it will be ready for widening. There's nothing I admire so much as system in the care and improvement of our roadways."—*Pall Mall Gazette*.

Extract from the Annual Report of the City Engineer and Street Superintendent of Richmond

Richmond, Cal., July 1, 1916.

To the Honorable Mayor and Council of the City of Richmond.

Gentlemen:

Herewith I have the honor to submit the Annual Report of the Offices of City Engineer and Superintendent of Streets, covering the year ending June 30, 1916.

Attached hereto is a tabulation of all work done by the city, under Public Proceedings, showing in detail, work done in 1914-1915, 1915-1916, and work under contract at this date. Also, herewith is a schedule of Street Openings to date.

The year just passed has witnessed the completion of more large contracts—with the exception of the Macdonald Avenue contract—than any previous year, notably Cutting Boulevard, the Richmond-Castro Avenue job, and the Castro Street outfall sewer.

STREETS.

There exist, at present, 186.5 miles of streets within the boundaries of the City of Richmond, as follows:

Paved with Macadam.....	4	miles
Paved with Oiled Macadam.....	30	"
Paved with Richmond Standard Macadam	91½	"
Paved with Sheet Asphalt.....	21½	"
Paved with Asphalt Concrete..	4	"
Paved with Bitulithic	10	"
all done under Public Proceedings.		

There are thirty miles of oiled macadam streets paved by tract owners, and there remain 96.5 miles unpaved.

Of all types of street construction, the oiled macadam has proven the least satisfactory. "Oiled Macadam" does not include the Richmond Standard Macadam, for streets constructed under these specifications seem to wear well, and even some of our oiled macadam streets are in fine condition. The disintegration of our oiled streets seems to be caused by one of two things: either the sub-base has softened or was soft, or the surface oil seems to have lost its adhesive qualities.

Of the oiled macadam streets now in bad condition, those having a good founda-

tion may be repaired by resurfacing with asphalt, but those having a bad foundation can never be made lasting.

Cross-ditching is the ruination of a great many of our streets, owing to the almost impossibility of getting a back-filled ditch to stay where it is put, leaving either a depression or a hump. A ditch running lengthways with a street is far more easily maintained than one crossing the traffic. Of course, this condition does not prevail on a street having a concrete base, but the replacement of the topping is frequently delayed in such cases by reason of the fact that there is no plant running at the time the repairs are needed. Nearly all cutting into either the asphalt or bitulithic streets is carefully done, and a slab of the pavement is removed, which may be replaced as a whole. The edges being then filled in with asphalt, the repair is as good as the original street, and is better than a new patch because the replaced piece has had exactly the same amount of compression and traffic as the surrounding portions, whereas a new patch may settle a bit under traffic.

During this coming year, a number of the old oiled macadam streets should be treated with a resurfacing coat of asphalt, or some other good resurfacer.

CITY MAP.

The large city map, which your body has so often called for, is practically completed, and we are now putting on the new street names. This map, when finished, will be 9 x 14 feet in size, and altogether too large for use, except as a wall map. I would therefore recommend that two reductions be made, one to a scale of 400 feet to the inch, the original map is 200 feet to the inch, and another to a scale of 600 feet to the inch. The 400 foot map would have all the lots shown, but the 600 foot map would have only the blocks outlined.

Either of these smaller maps would make fine block book maps for use in the Assessor's office. The entire cost of both reductions will be \$150.00, and will be money very well spent, besides which

the whole map should be copyrighted by the City of Richmond, and copies sold to anyone desiring such maps. I have no doubt but that the map would pay for itself.

STREET CREW.

Under Mr. Ellis, the streets have been kept in good shape so far as cleanliness is concerned, and some few repairs have been made on the surfaces of certain streets. I would like to make a systematic resurfacing job of the entire town.

It is, of course, well known to your body that the street crew is not run as economically as it might be, by reason of the fact that much actual charity work is handed out by this department, but there are a number of first-class men on the crew, and men who earn their wages. These men know that others are being paid the same wages for much less work, and I am in favor of a graded scale of wages,—dependent upon the class of work done by a man and his ability to do it. The men in the street department, particularly the sewer men, have much hard and dirty work to do, and frequently work overtime on emergency jobs. I have never heard a complaint from them, and I think they deserve recognition.

The streets of this city are kept clean and well sprinkled; all complaints in regard to sewer troubles or from other causes are attended to as soon as possible.

This office has had a proposal offering to do all the street work under contract, at about 75 per cent of what it is now costing the city, and a proposal to do the city sprinkling for \$12.00 per day. While this would reduce the city's expense of cleaning and sprinkling considerably, I do not think it is the desire of the Council to handle the matter in that form. If, however, the Council cares to consider it, I will present the proposal in proper form.

STREET EXCAVATIONS.

When excavations in the streets are made by the public utilities companies, the ditches are usually properly back-filled and paved, or if the ditch settles, the companies are usually very quick to make such needed repairs. It is a much harder matter, however, to keep the smaller cross ditches made by sewer ex-

cavations, in repair. I would recommend that the city take over all back-filling and repairing, making a stated charge per job, according to the class of paving existing on the street.

STREET SIGNS.

In connection with streets, it is my opinion that a system of street signs of enameled iron on a neat post, would be a great improvement to the city. While we place signs in the sidewalk wherever an improvement is made, they are not in very plain sight, and can be used by pedestrians but not by a driver of a vehicle, and they are particularly invisible to the stranger.

STREET LIGHTS.

The proposition made by the West Side Commercial Club in the matter of the installation of electroliers seems to have fallen through. This is a pity, for the electrolier system is the proper and standard and best method of street lighting. The light company, through its agent, Mr. C. M. Brewer, proposed at the time of the discussion of this lighting system, to install the system in the city free of cost to the city,—the only added expense being the light bill. The latter item, of course, would be practically doubled on the streets to be lighted in this manner. However, I know of no other city that has had such an offer made to it by the lighting company, and the offer appears to me too good to turn down.

SANBORN MAPS.

It would appear to me that the city should become a subscriber to the Sanborn Map. This is the map used by all insurance companies, and locates buildings of every sort and description. The map would be of great value to the Assessor, to the Fire Department, and to Commissioners in street opening or widening proceedings.

METER READER

Since the appointment of a meter reader, the general public seem to be much better satisfied with the service rendered. We have had many complaints of overcharging, but Mr. Clark, the meter reader, has endeavored to attend to such at a good deal of inconvenience to himself at times, and fre-

quently on his own time. As yet, he has never had occasion to report a meter which read in favor of the water company.

The relations between Mr. Clark and the water company are the best, and Mr. Farrell of this division has given every assistance in his power and has instantly made any changes demanded by the meter reader.

I would suggest that Mr. Clark be made a salaried employee of the city, and that he take over the reading of the gas company's meters also. This would necessitate a change of time of reading by the gas company, but the matter could probably be arranged, and I think that Mr. Clark could handle both jobs. There are about 7000 water meters to read, and there are about 3000 gas meters in the city.

Incidentally, it would seem advisable that the gas company put up a reading card such as the electric company uses, —showing the consumers the amount used per month.

STREET EQUIPMENT.

Of a street repair outfit, I will say that if bought, it would be a good investment, for streets may be relaid with this outfit in as good condition as the original street, and even better, for rock or oil may be added as shown to be required. This outfit is not a necessity, but a very great convenience. Its cost would be about \$2000.

LOT SURVEYING.

An ordinance exists in this city making it obligatory that the City Engineer make surveys of lots in this city, at a stated price of \$3 per lot. This ordinance should be repealed, as no lot in this city can be surveyed for that amount of money. Besides this, there are engineers in the city who do this sort of work and who are handicapped by the price set by the city. The City Attorney might just as well be instructed to take any case for or against a street contractor at a price set by the city, which price would be too low for any one else to handle the case with profit.

If the City Engineer must make such surveys, I would recommend that the price be made according to the time spent on the job, plus 10 per cent for rent, instruments and time lost.

FINANCIAL STATEMENT.

Following is a comparison of the expenses of the various accounts under control of these offices, for the years ending June 30, 1915, and June 30, 1916, together with the budget allowed for the year ending June 30, 1916:

(The tabulated statement follows.)

The cost of caring for improved streets, other than cleaning, went up \$2676.40, but the caring for unimproved streets dropped \$2284.40. In total the entire expense raised \$5608.31 and dropped \$9793.77, making a net saving over last year of \$4185.46.

The budget allowed for the past year was \$60,602.00, and we spent \$56,132.48, making a saving in the budget of \$4429.52.

The expense of your Engineer's office proper, for the year was \$28,043.20, and the receipts of the office were \$23,448.59, making a net cost to the city of \$4594.61 for the year, or \$382.88 per month.

The total value of work turned out by the Engineer's office (excluding street openings) was \$508,280.01, as stated above, and the fees (excluding street opening fees) were \$19,170.62, making a rate of 3 8/10% and the inspection fees on the same work amounted to \$4,912.00, giving an inspection rate of 9/10%. This gives your cost of engineering and inspection at 4 7/10%, which is 2/10% higher than it was last year, and still very reasonable.

The cashier has handled over the counter this past year \$77,977.25. Of this amount \$46,883.24 was collected for and turned over to the contractors on the various assessments. The balance was for general permits, sewer permits, incidentals on contracts, fees for deeds, etc.

The total cost of the Superintendent of Streets Department was \$28,166.53, and the total receipts \$1,326.94, making the total net cost \$26,839.59 per year, or \$2,236.63 per month. This includes foremen's salary, wages, tools, repairs of streets, sprinkling of streets, barn rent, and equipment and repairs, and the maintenance of water troughs, parks and comfort stations.

I have the honor to respectfully submit all the foregoing.

H. D. CHAPMAN,
City Eng. and Supt. of Streets.

National Septic Process Protective League

F. G. PIERCE, Secretary, Marshalltown, Iowa

For the short time that the National Septic Process Protective League has been organized, very satisfactory headway has been made in completing an organization, and the League will soon be in shape to defend any suit or suits brought by the Cameron Septic Tank Company for claimed infringement of the patents controlled by that company.

The first effort of the officers was directed toward securing an organization, it being the desire to secure members of the Board of Directors for each State who would represent the municipalities of that State, and be interested in the defense of any suits brought by the Cameron Company.

Nearly all of the different State leagues of municipalities have agreed to co-operate and have appointed one of their officers as a member of the Board. In those States not having State leagues the State Board of Health and well-known sanitary engineers have accepted an appointment.

At the present time the officers of the League are as follows: President, Dr. H. M. Bracken, Executive Officer, State Board of Health, St. Paul, Minn.; Vice-President, A. Elliott Kimberly, Consulting Engineer, Columbus, Ohio; Secretary-Treasurer, Frank G. Pierce, Secretary League of Iowa Municipalities, Marshalltown, Iowa; Executive Committee, A. Marston, Dean Engineering Department, Iowa State College, Ames, Iowa; C. A. Haskins, Engineer State Board of Health, Lawrence, Kans.; Paul Hansen, Engineer State Board of Health, Springfield, Ill.; Wm. J. Locke, ex-Secretary League of California Municipalities, San Francisco, Cal.; W.

P. Capes, Secretary New York Conference of Mayors, Albany, N. Y.

The following have become members of the Board of Directors: Arkansas—Guy A. Watkins, Consulting Engineer, Little Rock; California—Wm. J. Locke, Ex-Sec'y League of California Municipalities, San Francisco; Clas G. Hyde, Con. Eng., Calif. State Board of Health, Berkeley; Illinois—Paul Hansen, Eng. State Board of Health, Springfield; Langdon Pearce, Engineer, Chicago; Iowa—Hon. J. F. Cole, Pres. League of Iowa Municipalities, Oelwein; Lafayette Higgins, State Sanitary Engineer, Des Moines; Kansas—C. A. Haskins, Eng. State Board of Health, Lawrence; H. Talbot, Sec'y League of Kansas Municipalities, Lawrence; Maryland—Robert B. Morse, Eng. State Board of Health, Baltimore; E. B. Whitman, Sanitary Engineer, Baltimore; Massachusetts—F. A. Barbour, Sanitary Engineer, Boston; Michigan—W. C. Hoad, Sanitary Eng., University of Michigan, Lansing; Edward D. Rich, State Sanitary Engineer, Lansing; Minnesota—H. A. Whitaker, Sanitary Engineer, State Board of Health, Minneapolis; R. R. Price, Sec'y League of Minnesota Municipalities, Minneapolis; Nebraska—R. C. Ozman, Sec'y League of Nebraska Municipalities, Lincoln; New Jersey—Clyde Potts, Sanitary Engineer, Morristown; F. T. Parker, Sec'y Atlantic City Sewerage Co., Atlantic City; New York—W. P. Capes, Director New York Conference of Mayors, Albany; Theodore Horton, Sanitary Engineer, State Board of Health, Albany; North Carolina—J. L. Ludlow, Con. Engineer, Winston-Salem; Warren H. Booker, Engineer State Board of Health, Raleigh; North Dakota—C. J. McGurren, Sec'y State Board of Health, Devils Lake; Ohio—

W. H. Dittoe, Engineer State Board of Health, Columbus; E. G. Bradbury, Con. Engineer, Columbus; Oregon—David N. Roberg, State Health Officer, Portland; South Dakota—E. K. Mather, Sanitary Engineer, Mitchell; Texas—V. M. Ehlers, State Sanitary Engineer, Austin; Virginia—Richard Messer, Sanitary Engineer, State Board of Health, Richmond; West Virginia—Mayo Tolman, Director State Board of Health, Charleston; G. M. Osborn, Sanitary Engineer, Charleston.

As soon as funds sufficient to justify the action were secured, the Secretary, by direction of the President, secured a proposition from Mr. Wallace R. Lane, of Chicago, the attorney who successfully defended the city of Knoxville, Iowa, a number of years ago, against a claim by the Cameron Company, to act as attorney for the League. It was first decided to call a meeting of the Executive Committee in Chicago to consider this proposition, but later it was decided to submit the proposition of Mr. Lane to the different members of the Executive Committee by mail. As soon as all the members of the Executive Committee approve this proposition, or disapprove it, some definite action will be taken so far as an attorney is concerned. The chances are that Mr. Lane will be employed.

There has been some question on the part of the different municipalities as to whether the payment of dues, as fixed by the constitution, would be sufficient to finance the League. There are nearly seven hundred sewerage disposal plants in the country, that would be subject to royalty on condition the claims of the Cameron Septic Tank Company are upheld. Not more than fifty of these have settled with the Cameron Company, so that at least six hundred municipalities in the country are interested in the threatened suits of the Cameron Company and should join the association. If half of this number or three hundred join, it will give the League funds amounting to four or five thousand dollars, and as there are no salaries attached to the officers of the League, all this money can be used for legal services, postage and stationery. The en-

tire bill for postage and stationery will not exceed five hundred dollars, so that the League will have several thousand dollars that it can spend for legal services, if the different municipalities will all pay the one assessment asked for at this time.

Any municipality may feel perfectly safe in joining the organization because there would be no obligation to pay other fees if it should be necessary to ask for the same. It would be entirely optional with a municipality to pay or not pay as they thought best at the time the call was made. The President of the League has instructed the Secretary to incur no liability of any kind, unless the money is on hand to pay for the same, so that the members may feel at all times that no obligation will be incurred unless the money is in the treasury with which to pay the claims.

This is the age of co-operation and the municipalities and others interested in the combating claims of the Cameron Company should co-operate in defending any suit brought by that company. No one municipality, especially a small one, could afford to bear the expenses of defending a test case, but if all those interested will become members of the League any case brought against any of the members would be defended by the best legal talent, with the aid of sewerage purification experts in the country. Municipalities should bear this in mind, that irrespective of where the test case is brought that they are interested in the outcome, because if the claims of the Cameron Company are once established by the Supreme Court of the United States, such decision would fix the law and every city and town having a sewerage disposal plant would be liable for royalty. No municipalities having a disposal plant can afford to remain outside the League.

The municipalities of California responded to the call in fine shape. There are ninety-eight sewerage disposal plants in California, and out of this number the following have already sent in their membership fee: Sebastopol, Santa Cruz, Hanford, Colfax, Winters, Lindsay, Dixon, Healdsburg, Bishop, St. Helena, Santa Maria, Colusa, Corona.

THE CELEBRATED STREET PAVING SUIT OF NASHVILLE, TENNESSEE

An agreement has just been signed by four members of the Board of Commissioners of Nashville, Tenn., and representatives of the Southern Bitulithic Company authorizing a resumption of work and completion of the paving of streets by the company for which contracts were awarded in 1914 and 1915. The agreement contains a stipulation binding the commissioners to pay for work in accordance with the terms of the contract, in consideration of which the contractors agree to withdraw the suits brought against the city on account of losses sustained by reason of the protracted interruption of work and the advance in prices of materials since the work was suspended.

The principal suit involved in the matter which has acquired more or less national publicity is entitled "R. M. Burns vs. City of Nashville, et al.," and was brought about by the suspension of Mr. Burns from the financial department of the city by the Board of Commissioners on account of the losses of certain books and records of his department. The attorneys for Burns secured a temporary injunction against his discharge and instituted suit in the name of certain tax-payers, against the city, certain officials, corporations and individuals to the number of about fifty. As a result of this suit some of the Commissioners were ousted from office and the affairs of the city were at one time ordered in the hands of a receiver, which order, however, was immediately reversed by the higher court before it had time to go into effect. An injunction was issued prohibiting the city paying

any moneys on any contracts, especially paving contracts.

During this time (approximately one year) work was suspended by various paving contractors awaiting the decision of the City Commissioners, as to whether or not they would under the circumstances direct the several contractors to proceed with the carrying out of contracts which had been attacked by the so-called tax-payers on the various grounds on which the contracts were alleged to have been invalid.

Among other papers that were served on the Board of Commissioners was one advising the City Commissioners that the court would hold them and their bondsmen personally responsible for any money, or moneys, which might be paid on these paving contracts illegally.

Naturally the entire matter was referred to the City Attorney, but as he had previously given an opinion that the contracts were valid, it was suggested that he was incompetent under the circumstances, and the employment of special counsel to advise the Commissioners was decided upon.

After hearing the evidence for about twelve months, and the employment by the city of the service of an expert engineer, who spent considerable time in going into every detail of the paving contracts, and after receiving the report from the special counsel, the City Commissioners apparently decided that in order to protect the city's interest it was up to them to make with the paving contractors the best compromise agreement possible by which the contractors would

be willing to proceed with the work, and if possible have embodied in their agreement a provision that the contractors would not hold the city liable for damages, etc., on account of the long delay, which were due to the acts of the court.

The objections to the validity of the contracts were based principally on the charge that the Southern Bitulithic Company (the successful bidder) was a subsidiary of the patentee, Warren Brothers Company, and also that there was a combination to stifle competition. The Commissioners had refused to consider the bid of the West Construction Company for the reason that it had ignored one of the conditions which required that a license agreement be entered into with the Warren Brothers Company. The special counsel in their opinion held that the Warren Brothers' patent had been sustained by so many court decisions that the City Commissioners were simply exercising reasonable prudence in treating the Warren patent as established, and therefore excluding the bid of the West Construction Company. They also held that while the City Commissioners, by specifying Warren Brothers' bitulithic at \$1.25 a spare yard, had excluded from competition seventy per cent of the total cost: nevertheless the other thirty per cent was supposedly open to competition, and practically considered it did not appear that the city was damaged by this circumstance. The unfairness consisted in an opportunity of Warren Brothers Company or its subsidiary to underbid all other competitors, not to overbid them. The opinion of the special counsel went on to say:

"Indeed it may sensibly be urged that, if Warren Bros. Company was to do 70% of the work, it was best for it to do all; for, having already 70% at a good price, it could afford to do the remaining 30% without profit, and it had, as patentee, a greater interest in doing the work well, and presumably a better knowledge of how to do it.

"The vital question is whether the city had the power to award 70% of the cost of the contracts in advance of the bidding, a matter that we discuss further on in this opinion.

"The rule is that 'fraud, to be relieved against, must be operative and injurious to the party,' (Wayerbury vs. Netherland, 6

Heisk, 526), and that 'fraud without damage, or damage without fraud, gives no cause of action.' (Flippen vs. Knaffle, 2 Tenn., Ch. 240; Rogers vs. Dibrell, 6 Lea, 77; and see also Chamberlain vs. Coal Company, 92 Tenn. 13.)

"It has been seen that the 30% was awarded at a reasonable figure, so that, if there was any fraud here, the city was not damaged thereby.

"The question as to whether a municipality can specify a patented material under a charter which expressly or impliedly provides for competitive bidding is one which has often been before the courts, and one about which there is a decided conflict of authorities.

"The argument in favor of allowing municipalities to specify patented articles process on the theory that it is to the interest of the city and all its inhabitants, that the best materials and methods of construction, whether patented or not, should be followed.

"As stated in the case of Baltimore vs. Flack, 104 Md. 107, 64 Atl. 792, 46 L. R. A. (n.s.) 996:

"'Cities in the construction of public improvement ought to have, as do individuals in the construction of their own private edifices, the right to select for use the article or substance best fitted and adapted to the purpose; and to deprive the public of the right to select and use any such superior articles is opposed to public policy, and positively disadvantageous to the municipality.'

"We have no reason to doubt the validity of the Warren Bros. patent of this bitulithic paving. The courts have several times, as we have pointed out, sustained it and protected it against infringement.

"Also the information we have is that this bitulithic paving is good paving for municipal purposes. Mr. Douglas in his report says, (p. 38):

"'In justice to the Warren Brothers Company it is only fair to state that they have been very successful builders of bituminous pavements for many years, and it is fair to assume that they are of the opinion that their pavement is worth much more than those of their competitors, and that the prices contracted for by the city are reasonable.'

"Again, he says in a letter to Mr. Cameron of February 21, 1916:

"'I want to add the fact that we must concede that the laying of bituminous pavements is an art, that the Warren Brothers Company are masters of this art and therefore are desirable contractors. My experts must state that such is the case.* * *'

"And in this letter he says further:

"'We must admit that the Warren Brothers patents are probably valid, that the pavements they have laid in Nashville are excellent, that they are masters of the art of such construction, and that it is difficult to get contractors who have knowledge of the art approximately equal to theirs.'"

∴ What Our Pacific Coast Cities Are Doing ∴

Albany, Cal., received bids for \$75,000 worth of school bonds July 17.

Alhambra Union High School received bids July 13 for erecting new building to house manual training department. An election will be held August 3 to vote \$13,000 for a sewer farm and \$325,000 for the acquisition of a municipally owned water system.

Alturas has passed resolution of intention to construct concrete sidewalks.

Anaheim received bids July 13 for 3000 barrels of crude oil for street work.

Arcadia has commenced proceedings for improvement of portion of First Avenue for constructing cement sidewalks and cement curbing.

Auburn has voted \$25,000 for street paving.

Baker, Ore., has voted \$15,000 for a new school. County officials are inspecting sites for eleven proposed bridges.

Bakersfield. \$10,000 has been appropriated by the Federal Government for the survey of the highway to Mt. Whitney. Trustees have been presented with petition for paving of portion of 20th Street.

Berkeley received bids July 31 for the construction of curbs, storm-water inlets and vitrified ironstone pipe sewer. Resolution has been passed for the paving of University Avenue.

Boise, Idaho. People of Lapwai Valley will vote on proposition to issue \$150,000 bonds to improve highway.

Burlingame has commenced proceedings for the improvement of Elm Avenue by paving, guttering and construction of culverts.

Calexico received bids August 1 for \$30,000 municipal bonds. The Union High School received bids July 15 for school apparatus.

Canby, Ore., received bids July 17 for construction of a waterworks system.

Chehallis, Wash., will hold a \$500,000 bond election in November for paving of the highways.

Chino will receive bids August 15 for construction of a sewer system.

Coalinga will hold a bond election August 7 for municipal improvements as follows: City Hall, \$8,000; Municipal Natatorium, \$6,000, and for auxiliary fire-fighting system, \$14,000.

Coeur 'd Alene, Idaho, is considering bonding city for construction of municipal light and water system.

Concord Grammar School will receive bids August 3 for constructing heating and ventilating system.

Connell, Wash., will probably construct municipal water system at cost of \$9,500.

Elsinore will hold a bond election August 14 to vote \$3,500 for the purpose of building a bridge across the San Jacinto River.

Exeter is planning street paving.

Fullerton is contemplating improvements to the High School which will cost \$20,000.

Glendive, Mont., has voted \$65,000 bonds for a filtration system.

Healdsburg received bids July 11 for construction of extensions to the present sewage disposal system.

Helena, Mont. Canyon Ferry will hold a bond election shortly to vote \$4,000 for school buildings.

Hermosa Beach has accepted plans for a sewer system. Bids were received August 1 for paving with asphalt concrete portion of Third Street, East Railroad Avenue and Cochise Avenue.

Lemoore will receive bids August 7 for construction of a water cistern.

Lindsay-Strathmore Irrigation District will receive bids August 7 for \$1,400,000 irrigation bonds.

Livingston, Mont., will hold a \$45,000 bond election August 29 to build an addition to the high school.

Los Banos has voted \$63,000 for a school building.

Martinez has voted \$51,000 for building and furnishing school.

Marysville has adopted plans and specifications for improving six additional blocks of streets in the business section. A school house will be built at cost of \$18,000.

Merced School Trustees will receive bids August 5 for hot-air heating plant with oil burner for the large grammar school.

Mill Valley is planning municipal improvements in the way of grading several streets.

Modesto has received an appropriation from the Federal Government of \$65,000 for a post office building.

Multnomah Co., Ore., received bids July 19 for constructing reinforced arch and retaining wall on the base line extension.

Oroville is in favor of an irrigation project to irrigate 20,000 acres.

Petaluma will hold a bond election August 28 to vote \$45,000 for the elimination of Thompson Creek and \$30,000 for the permanent improvement of Main and Third Streets.

Pocatello, Idaho, has voted \$15,000 bonds for purchasing furnishings for the High School.

Reedley has started movement to build a municipal building.

Richmond is preparing to construct a storm sewer two miles in length at estimated cost of about \$125,000.

Roundup, Mont., will authorize bonds amounting to \$20,000 for a new city hall.

Sacramento has passed resolution of intention for a lot of street work. Bids will be received August 3 for 1917 model automobile for City Engineer's department.

Salinas will shortly commence street paving.

San Leandro received bids July 24 for construction of a storm water sewer in portion of East 14th Street.

San Pedro is contemplating the paving of Harbor Boulevard with bitulithic.

San Rafael will probably construct a new fire house in the near future.

Santa Ana has commenced proceedings for curbing, laying sewer connections and paving portion of Orange Avenue.

Santa Barbara will shortly commence paving portion of Valerio Street.

Santa Monica has passed resolution for the paving of several alleys.

Santa Rosa property owners on portion of B Street have signed up for asphaltum pavement.

South San Francisco will receive bids August 7 for paving of several streets.

Spokane, Wash., will receive bids August 3 for installing an ornamental lighting system on Main Avenue.

Stockton will pave and gutter several streets in the very near future.

Sutter Creek has voted \$15,000 for new school house.

Tracy will hold a bond election August 15 to vote \$19,000 to build fire house and purchase fire apparatus.

Twin Falls, Idaho, has voted \$36,000 bonds for bridge construction.

Vale, Ore. Warm Springs Irrigation District will hold an election August 15 to vote \$750,000 for the purpose of building a dam and preparing for distributing system.

Visalia is planning more street paving.

Whittier may pave Painter Avenue, as residents are in favor of it.

CALIFORNIA COUNTIES.

Contra Costa County received bids July 24 for preparing sub-grade, building bridges and culverts, excavating for bridges and culverts, and building road with concrete base on Division 4 of the county highway.

Del Norte County has provided \$100,000 for construction of harbor.

El Dorado County received bids July 24 for construction of new bridge across the North Fork of the American River, near the town of Coloma.

Fresno County will hold a \$3,600,000 bond election October 31 to build roads. There is an agitation on foot to improve road to and surrounding Huntington Lake. Bids will be received August 8 for installing electrolier lighting system in Court House Park.

Humboldt County will hold a \$1,500,000 road bond election August 29.

Kern County will receive bids August 8 for constructing two miles of paving, five miles southwest of Bakersfield.

Marin County will receive bids August 7 for covering the existing macadamized roadway of portion of G Street with a bituminous wearing surface.

Mendocino County will receive bids August 8 for constructing reinforced concrete bridge over Forsythe Creek.

Nevada County received bids August 1 for construction of reinforced concrete bridge across Dry Creek, near Spenceville. A movement has been started to obtain State appropriation to build road from Truckee to Reno; estimated cost \$60,000.

Orange County has accepted plans for concrete bridge across the Santa Ana River at estimated cost of \$40,000 and bids will be received August 2. Bids will also be received on same date for bridge across

Santiago Creek. An election will be held August 2 for lighting district at Laguna Beach.

Sacramento County. Carmichael Colony has voted \$90,000 irrigation bonds.

San Bernardino County is contemplating the construction of a county hospital at cost of about \$110,000.

San Mateo County will receive bids August 7 for surfacing with oil and screenings portion of Redwood City to San Gregorio Road. Bids will be received on same date for paving with oil macadam Seminary Avenue; also paving with oil macadam portion of Mills Avenue and construction of macadam shoulders along Redwood City to San Gregorio Road.

Santa Barbara County will receive bids August 4 for constructing reinforced concrete bridge over Zaca Creek.

Solano County will receive bids August 7 for construction of a 34-foot span reinforced concrete bridge on Road No. 141 near the town of Dixon. On same date bids will be

received for construction of an 18-foot span reinforced concrete bridge on Road No. 310. Bids will also be received on same date for construction of bridge of reinforced concrete with 40-foot span across Alamo Creek.

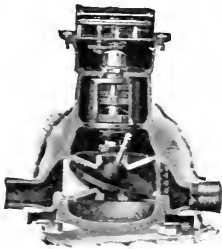
Stanislaus County will receive bids August 15 for construction of a concrete road on portion of McHenry Avenue.

Tehama County has ordered three new bridges, two of them across the north branches of the Los Molinos River, and a bridge across Dye Creek. Plans and specifications have been ordered for a bridge across Bee Gum Creek.

Tulare County is to have a new jail to cost \$40,000.

Ventura County will receive bids September 8 for construction of Aliso Canyon Bridge on the Willoughby Road. On August 8 bids will be received for improving Division 7 by grading and paving with concrete a distance of 8.77 miles.

Yolo County will receive bids August 14 for construction of court house building.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

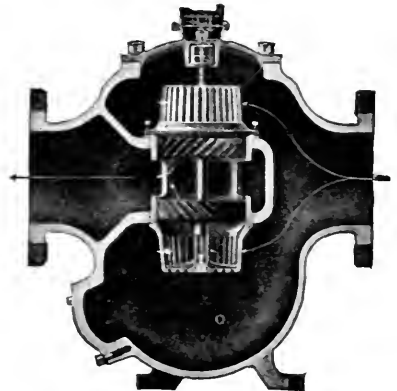
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Garbage, rubbish, and waste matter, regulating the keeping, gathering, receiving, disposing and destruction thereof. Sacramento, 689.

Bonds, providing for the issuance of. Santa Monica, 690.

Barbers and barber shops, regulating sanitary conditions, prescribing a license for the purpose of enforcing such regulation and authorizing the employment of special inspectors, and fixing their compensation. Sacramento, 691.

Curb lines, establishing of. Arcadia, 692.

Junk or second-hand dealers, licensing of and the keeping of reports from whom their goods is purchased and the amount paid. (Amending.) Pittsburg, 693.

Grades, establishing of. Whittier, 694.

Vehicles, providing that they stop about fifteen feet from street cars, while they are taking on or discharging passengers. Nevada County, 695.

Fire limits, making and designating of and forbidding the erection and repair of buildings without the consent of the Board of Trustees. Sonoma, 696.

Plumbing and drainage, relating to. Napa, 697.

Election, for the proposition of bonded indebtedness. Coalinga, 698.

Milk, permits for the sale of, defining adulterated milk and the right of the Board of Health to take samples. (Amending.) Alameda 699.

Streets, ordering the closing up of Spring Avenue. Oakland, 700.

Intoxicating liquors, prohibiting the purchasing or procuring of by minors. Lemoore, 701.

Highways, regulating the traffic and the making of excavations and other public works thereon. Kern County, 702.

Milk and milk products, regulating the handling, sale and distribution of, and imposing a penalty for the violation of. Alameda, 703.

Zone of quiet, creating and establishing of. Alameda, 704.

Junk dealers, licensing of; regulating the purchasing and selling of goods. Nevada County, 705.

Milk, regulating the production, handling, sale and distribution of, prescribing the standard of milk intended for pasteurization and imposing a penalty for the violation of. Alameda, 706.

Gasoline and other inflammable material, regulating the storage of. Bishop, 707.

Paved streets, roads and highways, regulating the use of by certain vehicles. San Mateo, 708.

Hospitals and sanitariums, regulating the establishment and maintaining of. Eagle Rock, 709.

Amusement places, requiring license. Burlingame, 710.

Wharfage and dockage, fixing rates on municipal wharf. Santa Cruz, (Amending) 711.

Emergency hospital service, authorizing contract for. Berkeley, 712.

Coyotes, wildcats, bobcats, providing bounty for killing. Sierra County, 713.

Streets, regulating the use of by self-propelled motor vehicles carrying passengers for hire, and providing for the licensing of such vehicles. National City, (Amending) 714.

Railroad permit, granting for fifty years to operate single or double track. Sacramento, 715.

Election, for bonded indebtedness. Elsinore, 716.

Automobiles for hire, regulating the operating and driving of, license the carrying on such business, and requiring the furnishing of bonds. Alameda, 717.

Fire Marshal, creating the office of and prescribing his powers and duties. National City, 718.

Board of Education, right to control and direct the supervision of play and recreation activities in the playgrounds, and giving control of funds for such purposes. Alameda, 719.

Livery Stables, corrals or other places for animals for hire, prohibiting the construction, maintenance or keeping within residential district. Sierra Madre, 720.

Peddlers and solicitors, licensing for regulation and revenue. South San Francisco, 721.

Dogs, licensing of. Sierra County, 722.

Relief and Employment Commission, creating and defining its powers and duties. Fresno County, 723.

Wholesale liquor dealers, licensing of. Coronado, 724.

Licenses, when and how they shall be paid. Yreka, 725.

Grades, establishing of. Santa Monica, 726.

Street, improving of. Santa Monica, 727.

Bonds, providing the issuance and redemption of. Susanville, 728.

Bonds, issuance of. Auburn, 729.

Recreation Commission, creating and prescribing the duties of. San Leandro, 730.

Funds, creating and defining. Santa Barbara, 731.

Grades, changing of. Corona, 732.

Election, for bonded indebtedness. Sunnyvale, 733.

Motor vehicles for hire, regulating the operation of on Tunnel Road. Oakland, 734.

Appropriating money for payment of street work. Oakland, 735.

- Fire company**, providing for the organization of. Porterville, 736.
- Gas distributing system**, regulating of. Huntington Beach, 737.
- Park Commission**, creating of. Santa Barbara, 738.
- Positions in the Department of Public Works**, creating and providing for the compensation of. Oakland, 739.
- Grass, weeds and other obstructions** from sidewalks, relating to the removal of. Mayfield, 740.
- Grades**, changing and re-establishing of. Santa Monica, 741.
- Street railway companies**, requiring them to keep tracks clean. Los Gatos, 742.
- Curb grades**, establishing of. Oakland, 743.
- Right**, granting to Pacific Electric Railway Company, to operate and maintain an electric railroad on certain streets. Whittier, 744.
- Grades**, establishing of. Upland, 745.
- Professions, trades, callings and occupations**, licensing and regulating. Santa Monica (Amending) 746.
- Plumbing inspector**, providing for. Anaheim, 747.
- Contracts**, awarding of. Berkeley, 748.
- Election**. San Rafael, 749.
- Animals**, relating to running at large. (Amending.) San Mateo, 750.
- Sidewalks**, changing and establishing width of. Oakland, 751.
- Motor vehicles for hire**, licensing of. Upland, 752.
- Animals or vehicles**, prohibiting the driving over or upon sidewalks. Walnut Creek, 753.
- Bees**, prohibiting the keeping of within city. Corona, 754.
- Permission**, granting to C. L. Best Gas Traction Company to construct an overhead track, and to maintain the same. San Leandro, 755.
- Motor vehicles for hire**, licensing. Santa Monica, 756.
- Hacks, coaches, omnibuses or automobiles for hire**, regulating of. Redondo Beach, 757.
- City Attorney**, prescribing duties and compensation. Anaheim, 758.
- Buildings**, regulating of. (Amending.) Bakersfield 759.
- Lottery tickets**, papers, stamps, prohibiting the possession of. Stockton, 760.
- Rates for electric lights**, regulating the payment of. Anaheim, (Amending) 761.
- Compensation of certain officers**, fixing of. Anaheim (Amending) 762.
- Municipal refuse**, providing for the collection of. Berkeley, 763.
- Hand bills**, prohibiting the scattering and posting of and regulating the erection, maintenance and use of bill boards. Lindsay, 764.

RELIABLE FIRMS

The firms mentioned below specialize in municipal work or furnishing supplies for the same. They bear a good reputation for reliability and fair dealing. In case of proposed work or needing supplies you are urged to write them. Catalogs sent on request.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Asphalt Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, California Bldg., Los Angeles.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Cast Iron Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Cement Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Concrete Mixers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

California Corrugated Culvert Co., Los Angeles and West Berkeley.
American Corrugated Culvert Co., 706 Hobart Bldg., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.
Bowers Rubber Works, 68 Sacramento St., S. F.

Flushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.
Pacific Flush Tank Company, Chicago and New York.

Gas Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Hollow Tile

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Co., Chicago and New York.

Inspection and Tests

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Lighting Systems

General Electric Co., Rialto Bldg., S. F., and 724 S. Spring St., Los Angeles.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251 Bush St., S. F.

Ornamental Lighting Systems

General Electric Co., Rialto Bldg., S. F., and 724 S. Spring St., Los Angeles.

Pavements

Warren Brothers Co., California Bldg., Los Angeles.
City Street Improvement Co., Whittell Bldg., S. F.

Pavement Materials

Warren Brothers Co., California Bldg., Los Angeles.

Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Pressed Brick

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Road Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Scarifiers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Company, Chicago and New York.

Sewer Fittings

Pacific Flush Tank Company, Chicago and New York.

Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

**ARMCO
IRON**

**DRIVEWAY
CULVERTS**


Make possible a smooth, unbroken entrance from the street into private property, into garages, etc., and are especially adaptable for places where little headroom is available. Thin and compact, yet enormously strong due to corrugations. Offered in various sizes to provide ample water-way, and can be easily and quickly installed at low cost. Further particulars for the asking.

CALIFORNIA CORRUGATED CULVERT COMPANY

411 Leroy St., Los Angeles
400 Parker St., Berkeley

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Rock Crushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Roofing Tile

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Street Lighting

General Electric Co., Rialto Bldg., and 724 S. Spring St., Los Angeles.

Street Sweepers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Testing Materials

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Water Meters

Neptune Meter Company, San Francisco and Los Angeles.
National Meter Co., 141 New Montgomery St., S. F.

Water Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Weed Killers

Atlas Preservative Company of America, Rialto Bldg., S. F.

Street Signs

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Vitrified Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Visit Beautiful Lake Tahoe



and the

Tahoe Country

Enjoy the lure and invigoration
of the Mountains

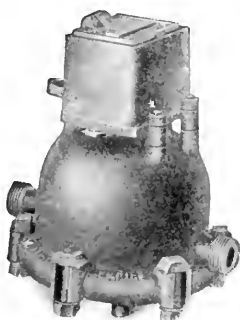
Camping ♪ *Tramping* ♪ *Fishing*
♪ *Boating* ♪

Comfortable Hotels and Cottages
Meals at Reasonable Prices

REDUCED ROUND TRIP FARES For Illustrated Folder, Fares and Train
Service Ask Southern Pacific Agent

WATER METERS

FOR ALL KINDS OF SERVICE



EMPIRE METER

CROWN EMPIRE
NASH GEM
EMPIRE COMPOUND
PREMIER METERS

TYPE K NASH METER

The
SIMPLEST
DISC METER



NASH METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

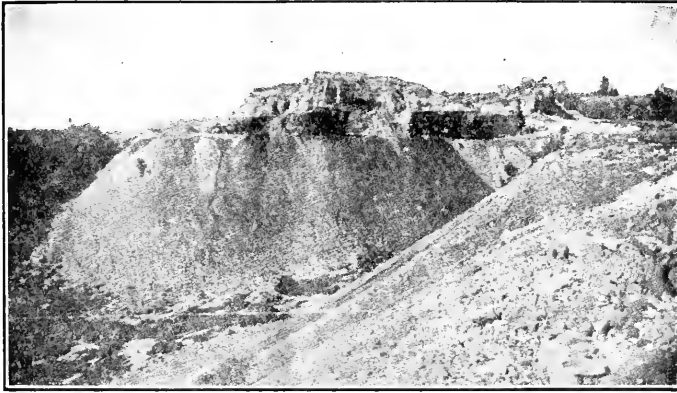
CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:

Monadnock Bldg.

Northwest Office:

Northwestern Bank Bldg., Portland, Ore.

General Offices:

Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Los Angeles

Montreal

Mexico City

Seattle

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.

Mention "Pacific Municipalities" when writing for catalogs.

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO
THE MUNICIPAL LEAGUE OF MONTANA
—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

LEADING ARTICLES IN THIS ISSUE

The Bone Retaining Wall.....	323
Program for the Visalia Meeting.....	326
Accommodations at Visalia.....	331
Exhibit of the Monroe Calculating and Adding Machine.....	331
The High Cost of Materials.....	332
Modern Tax Valuation Methods Needed—Not New Tax Laws.....	333
.....James G. Stafford	
Money Due Municipalities Under the Reimbursement Clause of the Constitution.....	338
Will Show Up Methods.....	338
Should You Plan Your Improvement Now?.....	339
.....Arthur L. Collins	
A Survey of the New System of Accounting in Los Angeles County Prescribed by the State Board of Control.....	341
.....W. D. Hamman	
An Important Talk on Taxation.....	344
The Billboard Nuisance.....	345
.....Minnesota Municipalities	
Penalizing Violators of the Fire Marshal's Orders.....	346
What Our Pacific Coast Cities Are Doing.....	347
Titles of New Ordinances Received.....	349

ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.
Two Dollars a Year
Single Copy 25 Cents

Mr. City Clerk—

Are You Supplied

with our New Loose Leaf **Segregation Register** for making your report to the State Controller, as just revised?

Have you had any trouble in making out your report? Our Register will save you time and annoyance. William Dolge, C. P. A., has assisted in its preparation and has approved this Register. Offered at the following prices:

Full canvas Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$15.00.**

Russian Corduroy Transfer Binder, one set Indexes, one copy of instructions and 200 sheets for **\$17.50.**

Current Binder, one set Indexes, one copy of Instructions and 200 sheets for **\$22.50.**

Do You Know

that every **City Treasurer**, under chapter 19, approved April 14, 1913, is required to keep a **Bond Register** for registering Bonds?

We have carefully compiled and now have ready for distribution a book for this purpose.

SEND US YOUR ORDER

A. CARLISLE & CO.

Stationers and Printers

251 BUSH STREET

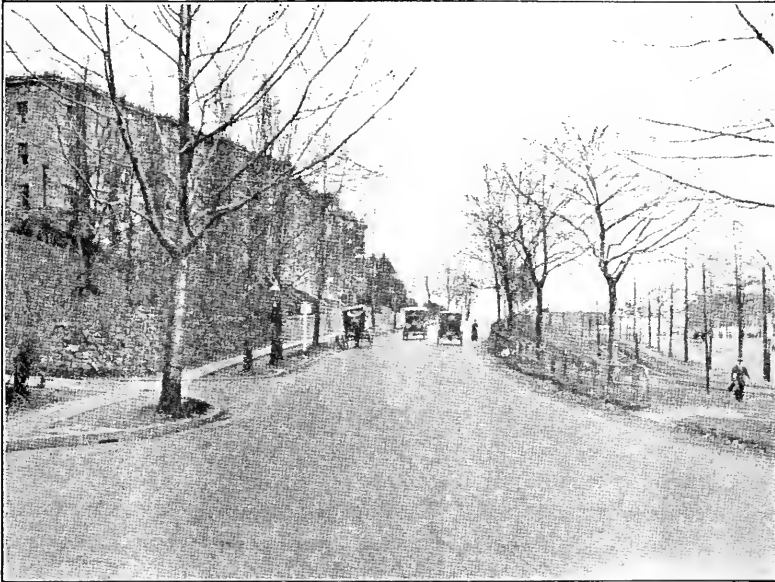
SAN FRANCISCO

Mention "Pacific Municipalities" when writing for catalogs.

TRY BITULITHIC FIRST

Over 400 cities have adopted Bitulithic for their streets.

BITULITHIC is the logical Pavement for city streets.



BROOKLINE, MASS.

Bitulithic Pavement, Beacon Street (North Drive). Laid over old Macadam, 1914.

Let us co-operate with you on the BEST Construction to "TRY OUT" in making new plans for street paving—Then you will pave with nothing but Bitulithic.

We will give you the Benefit of our long experience in the street paving industry.

Better be glad—first
than sorry—later

Pave your streets with the world famous

BITULITHIC

Not the Cheapest—But the Best

Let us send you illustrated booklets—a postal card will bring them to you—Do it now—Write today to

WARREN BROTHERS COMPANY

Executive Offices:
Boston, Mass.

District Offices:

New York, N. Y.

Los Angeles, Cal.

Nashville, Tenn.

Utica, N. Y.

Vancouver, B. C.

Chicago, Ill.

Portland, Ore.

Richmond, Va.

Montreal, P. Q.

Rochester, N. Y.

Phoenix, Ariz.

St. Louis, Mo.

Winnipeg, Man.

Toronto, Ont.

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	-	-	-	(City Clerk of San Diego)	-	-	ALLEN H. WRIGHT
First Vice-President	-	-	-	(City Attorney of Napa)	-	-	WALLACE RUTHERFORD
Second Vice-President	-	-	-	(Pres. Board of Public Works of Los Angeles)	-	-	LORIN A. HANDLEY
Secretary	-	H. A. MASON				Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Corcoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyside, Taft, Tehachapi, Tracy, Tropic, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 9

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, PH. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G. SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

SEPTEMBER, 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

THE BONE RETAINING WALL

SYNOPSIS—The patent on a cantilever reinforced concrete retaining wall, held by F. A. Bone, is being vigorously defended by its owner, who is demanding, and obtaining royalties from many cities, railroads, etc. Decisions against infringers of the Bone patent have been rendered by Federal Courts in Ohio and Colorado. A decision against Bone has just been rendered in Indiana. This article describes the patent and recites what appear to be numerous anticipations in foreign literature.

Last February the Board of Trustees of the town of Mill Valley received a letter from a firm of local attorneys, acting as representatives of Frank A. Bone of Ohio, demanding damages for infringement of a patent on a retaining wall issued to said Bone on July 29, 1902. The letter called attention to quite a number of decisions which had been rendered sustaining the validity of the patent and awarding damages for infringement, and closed with a suggestion that the town compromise and settle the matter and get a full release for all infringements and the right to construct additional walls.

The letter was referred to Mr. Charles E. Sloan, Engineer of the town of Mill Valley, who carefully investigated the claims and drawings set forth in the Bone patent. Mr. Sloan took the matter up with a number of engineers, and they

all agreed that the work done in Mill Valley did not amount to an infringement on the patent in question. Mr. Sloan then submitted a report to Mr. H. C. Symonds, Town Attorney of Mill Valley who, in response to a request from the Board of Trustees rendered a formal opinion on May 31, 1916, holding that the retaining wall in question did not constitute an infringement of the Bone patent. Shortly after Mr. Symonds submitted his opinion, a suit for damages was filed against the town of Mill Valley. Mr. Symonds immediately sought and obtained authority from the trustees to employ a specialist and thereupon engaged the services of Mr. John H. Miller of San Francisco, the well-known expert and authority on patent law.

An interesting article on the status of this patent appears in the issue of February 10, 1916, of the "Engineering News," reading in part as follows:

"The situation in regard to patents on reinforced concrete structures is becoming aggravated. Engineers who in good faith have designed and built structures of supposedly standard types or who in the course of regular practice have developed somewhat novel improvements of ordinary details are being confronted with royalty demands from holders of patents purporting to cover the structure in question. In some cases these patents are unknown or obscure, and the demand is apparently a chance shot fired in the hope of bringing down large game. In other cases the patent has been tested in the courts, and the demand is a part of a well-organized campaign to enforce the property rights of the owners of the patent.

"In the latter case the engineer can do little but accede to the demands, if he is convinced that the legal validity of the patent has been established; but the history of reinforced concrete patent suits has been such that most engineers hesitate to accept the rule laid down by court decisions or out-of-court settlements as final, so inadequately have most such suits been defended by the alleged infringers. Furthermore, in many of the patents the engineering evidence of use prior to the patent application is overwhelming, though there is much difficulty in impressing such evidence upon the intelligence of a court not familiar with engineering.

"To this last-named class belongs the Bone patent on reinforced concrete retaining walls. Covering, as it does, a most common engineering structure—a cantilever reinforced concrete wall, of which literally thousands of miles have been built in the United States—it would prove a gold mine to its owner if its validity were established. Backed by a favorable Court of Appeals decision, the owner, Frank A. Bone, of Cincinnati, Ohio, is now engaged in a systematic campaign for royalties on all walls of this type and is now prosecuting at least half a dozen suits against cities, counties and corporations for infringement. He has also published an advertisement offering 15 per cent of the royalty obtained to anyone informing his office of a wall on which royalty is finally collected. As a result, it is probable that

soon every cantilever concrete wall in the country will be under attack, unless court decisions adverse to the patent deter the owner from further activity.

"On account of the thoroughness of this campaign and the number of engineers who have been and will be concerned, Engineering News has thought it worth while to publish the history of the Bone patent and a list of what appear to be anticipations of it. Of course, the courts must finally decide as to whether these anticipations actually invalidate Bone's patent; but the engineering profession is entitled to know the facts regarding so important a matter.

"The patent is United States patent No. 705,732 and is dated July 29, 1902. The application was filed April 21, 1899, serial number 713,859. It was issued to Frank A. Bone, his application being dated April 18, 1899. The main paragraphs of the application and of the claims are as follows:

"My invention relates to improvements in retaining walls for abutments of bridges, seawalls, banks of streams, embankments, cuts, dams, dry docks and such places as it is desired to retain earth or other matter permanently in place with its face at an angle nearer vertical than it would naturally repose when exposed to the action of the elements or gravity.

"The said invention consists principally of introducing into masonry of concrete, stone or brick a framework of steel or iron in such a way that the whole wall is so much strengthened thereby that the volume of the masonry may be greatly reduced, and yet the height, base and strength against overturning, bulging or settling will still be ample.

"I am aware that retaining walls have been constructed of concrete and steel, but none to my knowledge have been supported on their own base as mine, nor have any of them entirely enclosed the steel within the concrete, nor have any of them used the weight of the material retained as a force to retain itself.

"Having thus described my invention, what I claim as new and desire to secure by letters patent, is:

"1. The combination with a retaining wall having a heel, of a metal structure

embedded vertically in said wall and obliquely in said heel, so that the weight of the retained material upon the heel of the metal structure will operate to retain the wall in a vertical position.'

"It is understood that Mr. Bone claims to have conceived the wall some time before the first application for his patent (1898). There was the usual discussion between the Patent Office examiner and the inventor, which is on record in the department, but the patents cited by the examiner do not appear to have been important.

"So far as can be discovered, there was no publication about Bone's wall until the latter part of 1901, or the first part of 1902. In *Engineering News*, March 27, 1902, page 242, there is a brief article describing the new type of wall invented by Mr. Bone, accompanied by a drawing which is practically a copy of the Patent Office drawing.

"After the publication of this article there were two letters in *Engineering News*, one by David A. Molitor, now of Toronto, Ont., the other by J. Lehman, of Copenhagen, Denmark. Mr. Molitor claimed that he had anticipated Bone's invention in a paper he read before the Cornell Society of Civil Engineers in June, 1899, published in the 'Journal' of the Association of Engineering Societies, Vol. 24, No. 1. Mr. Lehman claimed that he had built walls of precisely the same type in Denmark, as early as March, 1898, and that his invention was protected by patents in Denmark. The wall shown in Fig. 6 is the Lehman wall, Danish Patent No. 3,316, applied for, curiously enough, on the same day as the Bone patent—April 21, 1899.

"Subsequent to 1902, a number of articles appeared in L-shaped retaining walls, some of them by Mr. Bone and by Evan P. Bone; but little or no attempt was made to demand royalties under the patent. About this time the American literature of reinforced concrete began noticeably to increase; and from then on, the L-shaped retaining wall has become a fixture in the literature of the subject. In none of these books, however, has any definite statement been made that the L-shaped wall is patented.

"The first suits brought by Mr. Bone were commenced in 1912 and 1913. Since

that time at least two decisions have been rendered in his favor, the most important of which is that against the City of Akron, which was decided in the Federal District Court for the Northern District of Ohio, Eastern Division, in 1914, and affirmed by the United States Circuit Court of Appeals, Sixth Circuit, on March 2, 1915. Judge Dennison wrote the decision. This decision has been used by Mr. Bone as his main support in other suits that he has brought and also as a potent argument in favor of his patent in any controversy with alleged infringers.

"Another famous suit was that against the Chicago, Burlington & Quincy R. R., which was settled out of court. This suit against the railroad was for \$400,000, and on advice of counsel the railroad compromised with Mr. Bone for \$18,000. The photograph of this large check has been successfully used by Mr. Bone in his propaganda. The third case, in Denver, was settled in Mr. Bone's favor mainly on the basis of the Ohio suit, the defendant not having any new evidence to present.

"A fourth case, tried in Indianapolis before Judge Anderson, was decided against Mr. Bone on January 26, 1916 (*Engineering News*, February 3, page 246).

"In this last case, there were brought to the attention of the court, for the first time, a number of foreign publications showing what were claimed to be direct anticipations of the Bone patent. As mentioned last week, Judge Anderson in his opinion said he was convinced that in the Akron case the court did not have all the facts before it and he believed the prior art disclosed walls embodying the essentials of the Bone invention. His main point was that under these circumstances the patent could not be construed broadly and, if it were valid, the claims must be restricted to the particular form of reinforcement shown by Bone."

City Attorney Symonds and Special Counsel John H. Miller will appear before the Visalia meeting of the League of California Municipalities and raise the question as to the advisability of joint action by the cities and towns to contest the demands of the patentee.

PROGRAM FOR THE VISALIA MEETING

Much interest has been manifested in the preparation of the program for the Nineteenth Annual Convention of the League of California Municipalities which is to be held at Visalia early in the coming month. Many matters of great interest and importance to the cities and towns of California are down for discussion and consideration, and a large attendance is expected, particularly in view of the approaching session of the legislature. Undoubtedly many suggestions will be made at the convention for amendments to the present laws concerning municipalities. Among the subjects and speakers already selected are the following:

"New Legislation for Municipalities,"
by Charles N. Kirkbride, City Attorney of San Mateo.

Mr. Kirkbride's long experience as city attorney of San Mateo has resulted in his having acquired a State-wide reputation as an authority on municipal corporation law, and the City of San Mateo is certainly to be congratulated upon its good fortune in being so well provided for in this respect, and also to be commended for the display of good judgment in continuing to retain a man who possesses such a high order of ability.

At the forthcoming meeting at Visalia Mr. Kirkbride will call the attention of the Department of City Attorneys to the several minor corrections desired in the new bond act, and also other remedial legislation desirable for small cities and towns. Those who contemplate street improvements in the near future should urge their city attorneys to be sure and attend the convention.

"New Ideas Regarding the City Manager Form of Government," by Thomas H. Reed, City Manager of San Jose.

Professor Reed requires no introduction to the city officials of California. When the people of San Jose decided upon the adoption of a new charter, Professor Reed was employed on the work of framing the new instrument. There-

after when the charter was adopted the new city council turned to Professor Reed as the logical man to serve as city manager. From all reports received he is making good. Notwithstanding the fact that he has not had a very extensive experience as yet, nevertheless he has received a number of important new ideas which will be of great benefit to members of boards of freeholders and others interested in the framing of new city charters. A special invitation is extended to members of boards of freeholders, who are urged to attend the convention. They will be extended the privileges of the floor.

"A Field for Legislative Missionary Work in Small Cities of the Sixth Class." By H. A. Hopkins, President of the Board of Trustees of the City of Taft.

Mr. Hopkins has served as President of the Board of Trustees of the City of Taft for a period of six years, and he not only retains the good will and esteem of the people of that city, but has also achieved considerable reputation on account of the enthusiastic interest he has manifested in municipal government. It is hinted that Mr. Hopkins will undoubtedly offer some important suggestions for municipal legislation.

"New Ideas Regarding Sewage Disposal." By R. V. Orbison, City Engineer of Pasadena and T. D. Allin, Commissioner of Public Works of that city.

Mr. Orbison and Commissioner Allin who, by the way, is also an engineer, made an extended trip throughout the United States on behalf of the City of Pasadena investigating the latest methods of sewage disposal, particularly the new method known as the Activated Sludge Method. It was the common practice in early days for municipalities to use a cesspool or run their sewage into streams without previous treatment. Shortly after the organization of the League of California Municipalities a demand was made for the introduction

of more sanitary methods, and the agitation was followed by the introduction of septic tanks, built somewhat on the lines laid down by Donald Cameron and others, and later by Dr. Imhoff. The Activated Sludge Method is the very latest idea for sewage treatment. City officials who have this problem to contend with are urged to send their councilmen, engineers and street superintendents to this meeting so as to secure the information first hand from Messrs. Orbison and Allin. The talk will be given on Wednesday evening, October 11, and will be illustrated by approximately 75 stereopticon views. Prof. Charles Gilman Hyde of the Department of Civil Engineering of the University of California, who has also made quite an investigation of this new method of sewage disposal will participate in the discussion of this question.

"Systematic Street Lighting." By Mr. Manahan, City Electrician of Los Angeles.

A great many cities and towns are considering the introduction of the electrolier system of street lighting. The question of the kind of standards to use, their proper distance apart, the most efficient lamps, and such matters will undoubtedly be taken up by Mr. Manahan in detail. The General Electric Company will have an exhibit of globes and the latest luminous arc lamps, while the Pacific Sales Corporation and the Pacific States Electric Company will have exhibits of the latest models of lamp posts and standards, which will be bound to contribute greater interest to the address by Mr. Manahan.

"Garbage Disposal." By M. M. O'Shaughnessy, City Engineer of the City and County of San Francisco.

One of the San Francisco newspapers recently reported Mr. O'Shaughnessy as saying that in his opinion garbage incinerators were still in an experimental stage. Most officials are undoubtedly aware of the failure of the incinerator recently constructed for San Francisco; also of the one in Berkeley, and many of them believe that an efficient and economical garbage incinerator has yet to be

designed. Interest in this subject will not be confined to the large cities only, as the organization of public utility districts to enable a number of small municipalities to combine and jointly operate garbage disposal works are being seriously considered. The health of the community is involved in this question, and therefore the matter is of more than passing interest.

"Report of City Managers."

A feature of the program which is bound to be of great interest will be a report from the City Managers of the State of which about eight are recorded up to the present time. In addition to Professor Reed, word has been received from City Manager Morgan of Bakersfield and City Manager Boland of San Rafael that they will attend the convention, and favorable word is expected from City Manager Lockwood of San Diego and several others throughout the State. Freeholders having in hand the framing of new charters are sure to be interested in this feature of the program, and they should make a special effort to attend this meeting.

"Municipal Jitneys."

The speaker on this question has not yet been selected, but in all probability will be one of the city officials of Sacramento. At a recent meeting of the city council of Sacramento, Councilmen Turner and Carragher and City Clerk Desmond were officially appointed as delegates to attend the convention as representatives of the Capitol City.

"A Proposed New Improvement Act."

By Albert Mansfield, City Attorney of Redwood City.

City officials generally will probably say at once that we have enough improvement acts at present. However, Mr. Mansfield's idea involves the amendment of the "Local Improvement Act of 1901." Mr. Mansfield has made considerable use of this act in the improvement of streets in Redwood City and is well qualified to suggest amendments for making it more attractive. The chief feature of the act lies in the fact that the money is collected before letting the contract, thus assuring the contractor that

the money is on hand, and inducing him to offer the lowest possible price for doing the work. Mr. Mansfield has served as City Attorney for Redwood City for a great number of years, and the officials of that city have the wisdom and foresight to appreciate the value of experience and realize the folly of substituting a green man for trivial reasons. The recommendations of City Attorney Mansfield will undoubtedly be taken up by the Committee on New Legislation to be appointed at this convention.

"The Policy of Joint Organization in Patent Litigation." By H. C. Symonds, City Attorney of Mill Valley, and John H. Miller, Special Counsel of that city.

Many of the officials will recall the recent organization of the National Septic Process Protective League in Iowa to defend the cities from the demands of the Cameron Septic Tank Company. In the January issue of "Pacific Municipalities," we called attention to the Schofield Patent Odorless Sewer System, which was commented on at that time by City Attorney Yell of Sacramento, who believes that Schofield's alleged patent was anticipated several years ago. Now comes the Bone patent retaining wall insisting upon the Town of Mill Valley paying nearly \$200 royalty. If the claims of Bone's representatives are upheld in this case a great many other cities throughout the State will be called upon to pay damages for infringements. The suggestion has been made that it might be advisable to form a national organization of municipalities for the sole purpose of contesting those matters which very often are nothing more or less than cold-blooded holdups.

"Some Problems of Municipal Accounting and Their Solution." By M. L. Hanseom, City Auditor of Berkeley.

Perhaps no one is better known in the Department of Clerks, Auditors and Assessors than City Auditor Hanseom, who has been an enthusiastic supporter of the League almost since its inception. Mr. Hanseom is so highly regarded by the people of Berkeley that he is looked upon as a fixture in the city government.

He will undoubtedly have some very important information for the delegates in this department.

"Relation of the Municipalities to the Enforcement of Police Provisions of the Motor Vehicle Act." By H. A. French, Superintendent of the Motor Vehicle Department of the State Highway Commission.

Regarding this subject, it is said that there is not one city in the State complying with the provisions of the Vehicle Act regarding the signs to be posted and their wording, the manner of making arrests, and the fines imposed and their disposition. In all probability 90 per cent of all arrests for speed violation could be beaten if taken to a higher court. It will be not only instructive but undoubtedly very interesting to hear the comments of Superintendent French on this subject.

"Paying for the State Highway Through Municipalities." By Joel H. Smith, City Attorney of Selma.

This is sure to be a very interesting topic for discussion because of the fact that the continuation of the State and county highway systems through municipalities has proved to be a greater burden than the municipalities could bear in a number of cases. Again, in some cases, the counties have borne a portion of the expense of the highway where it runs through a town, while in other parts of the State, the counties have absolutely refused to contribute a cent. How the matter should be financed equitably is an important question crying for solution. Mr. Smith will tell how it was done in Fresno County.

"Assessment and Collection of City Taxes by the County." By Clyde Woodworth, City Attorney of Inglewood.

This is a question that has commanded considerable attention of late. It is certainly an advantage to the taxpayer to be able to pay all his taxes at one time and place. On the other hand, there is a great advantage in having an assessment made by a local official who is sure to have the best knowledge of real estate values. Moreover, as a general rule, county values are altogether

too low as compared with city values. Mr. Woodworth will have some interesting points to bring before the delegates. The talk will be delivered before the Department of City Attorneys.

"Value of Initiative in City Officials."

By Frank Kasson, City Clerk of Palo Alto.

For the past four or five years Mr. Kasson has been an enthusiastic attendant at the annual meetings of the League. He is a Past President of the Department of Clerks, Auditors and Assessors. The officials of Palo Alto have had some unusual problems to contend with and Mr. Kasson's talk will undoubtedly touch upon a number of them.

"How California Library Service Meets City Needs." By J. H. Quire, Legislative Reference Librarian.

Many of the city officials will remember Mr. Quire as Secretary of the Bureau of Municipal Reference of the University of California. In such capacity he has attended the annual meetings of the League for the past three years and has taken an active part on the program. Recently Mr. Quire left the University to take a position in the State Library at Sacramento. Mr. Quire is not only an entertaining speaker, but he always has his subject thoroughly in hand. The city officials will undoubtedly be glad to know how the State Library is able to assist them.

"Grade Crossings." By John Topham, Member of the City Council of Los Angeles.

It has fallen to Councilman Topham's lot to give special attention recently to the subject of grade crossings. The city officials generally will agree that the subject has become peculiarly important of late, therefore a talk by one who has given the matter special study is bound to be of value.

"Suggestions to Municipalities." By John S. Chambers, State Controller.

In the course of their relations to the State government, State Controller Chambers is the man with whom city officials are mostly brought into contact. Mr. Chambers always has something of importance to say.

"The Right of a Municipality to Serve as Contractor in Street Improvements." By A. H. Winder, City Attorney of Riverside.

City attorneys are not agreed on the question as to a city's right to take over a street improvement when the prices submitted by the contractor are not satisfactory. Provisions permitting this to be done are contained in the city charter of Riverside and quite recently the threat was held out that the city might take over certain street improvements if the prices offered were not satisfactory, with the result that the successful bid was \$6,000 less than calculated. City attorneys who are interested in this point should plan to attend the convention; they might do well to refer to the case of Los Angeles vs. Leland, 11 Cal. App. 302; Don vs. Pfister, 51 C. D. 162; 155 Pac. 60; In re Lemon, 143 Cal. 558. Mr. Winder has given the matter considerable investigation and his address is bound to be of great importance. His talk is programmed for October 12.

"Extension of the Police Powers and the Federal Constitution." By Frank D. Stringham, City Attorney of Berkeley.

The exact title of Mr. Stringham's subject has not yet been selected, but the one given will enable the officials to obtain a general idea of the subject of his proposed talk. Mr. Stringham will show by example and illustration the extent of the modern tendency towards greater regulation and enforcement, from which he will draw some very interesting conclusions.

"The State Highways and the Municipalities." By Chas. F. Stern, member of the California Highway Commission.

Mr. Stern favored the League with an address at the Del Monte meeting, speaking in a church at Pacific Grove. Owing to a slight mix-up in the program on that occasion, many of the city officials missed the opportunity to hear him. In this case, there will be no likelihood of such an unfortunate occurrence as all the meetings will be confined to the city of Visalia. The cities are very anxious to give every possible aid and encouragement to the splendid work being done

by the California Highway Commission and Commissioner Stern is assured of a warm welcome.

"Financing County Highways with City Money." By J. D. Hall, City Attorney of Richmond.

The Board of Supervisors of Contra Costa County recently levied an extra tax in addition to the regular road fund as a special fund for the construction of highways through the county. The action of the board was severely criticized by the City of Richmond, the city officials charging that the supervisors certainly had no moral right and it was very doubtful if they had a legal one, to finance the building of county highways in this way. A legal proceeding against the supervisors was commenced but afterwards dropped. City Attorney Hall has examined the law in question and will have some important suggestions to make relative to proposed amendments.

"The Municipality as a Public Servant." By Frederick Baker, City Attorney of San Fernando and several other municipalities.

As an ardent supporter of the League of California Municipalities and its work Mr. Baker seldom misses one of the annual meetings of the League if it can possibly be avoided. The subject of his talk on this occasion will be to suggest in a general way the many things out of the ordinary routine which even a small town can do to improve civic surroundings, increase interest in the communal life and be of real service satisfying the advancing needs of humanity.

"Equalization of Tax Valuations on Real Property." By James G. Stafford of Los Angeles.

Mr. Stafford, although a young man, has made considerable reputation for himself as a consulting tax valuation expert and has just completed an important piece of work for the City of Los Angeles. Further comment on this important feature of the program will be found in another column.

"The High Cost of Supplies to Municipalities." By J. F. Byxbee, Jr., City Engineer of Palo Alto.

This is one of the most important subjects that could be taken up by the

League. From his investigations, Mr. Byxbee finds that municipalities are being greatly overcharged for materials and supplies, and he believes that the time has come for the League of Municipalities to take some concerted action to stop it. A recent letter on this important subject to Mr. Jas. E. Sutton, President of the Department of Engineers, Councilmen and Street Superintendents, will be found in another column.

The complete program will be published in the next issue, including the program of the Department of Public Health, which will be put in the mails on or about the 2nd of October.

In accordance with the custom of the past five years an exposition of municipal machinery and supplies and methods will be held in connection with the convention. This exposition will be held in the municipal auditorium.

In a neighboring building and adjacent to the meeting place of the department of Public Health there will be a Pure Food Show conducted under the management of Professor Jaffa, State Nutrition Expert. Both of these expositions will be opened to the general public and a large attendance is expected from the many large valley towns in the neighborhood of Visalia.

A deplorable lack of knowledge seems to exist on the part of the general public as to the importance of pure food and the inestimable value of sanitation, and the annual custom established five years ago of holding an Official Pure Food Exposition in connection with the annual meeting of the State, County and Municipal Health Officers should be warmly endorsed and substantially supported. It is desirable that the public be thoroughly educated on the importance of all matters concerning the public health and be made to understand that that which is sold for human food is either "pure" or "impure." There is no intermediate quality. They must be made to understand that the only food fit to eat is "pure food" and that adulterated or impure food is the dearest investment one can make regardless of price; also that salicylic acid, boracic acid, formaldehyde and coal tar dyes are not food but poison and sure to injure the strongest stomach eventually.

ACCOMMODATIONS AT VISALIA.

City officials who contemplate attending the convention at Visalia need have no fears as to the ability of Visalia to house and otherwise take care of the delegates. Committees have been appointed by the city council to handle every detail and the pledge has been given that the delegates and their friends will receive a heartier and more enthusiastic welcome from the people of Visalia than was ever received before at any previous meeting of the League.

A special committee of the ladies of Visalia has been appointed to look after the entertainment of the ladies accompanying the delegates and their friends, and scores of automobiles have been donated for the purpose of giving the ladies a good time, while the gentlemen are hard at work discussing the municipal problems. A joint committee on Entertainment and Reception will have general charge of the reception and entertainment of the delegates, the membership of which committee is comprised of the leading men and women appointed by every municipality in the county of Tulare. The formal reception will take place on Tuesday evening, October 10, followed by the dedication of the municipal auditorium and concluding with a grand ball. On the conclusion of the session on Saturday arrangements will be made for taking the delegates to the Giant Forest which contains the largest living trees in the world. All railroad lines leading to Visalia have granted the regular convention rate of one and a third fares for the going trip and be sure to ask the ticket agent for a convention certificate. This certificate must be signed by the secretary of the convention, after which it will entitle the holder to secure a return ticket for one-third the regular fare. In order to provide against any possibility of lack of accommodations the Visalia committee on Reception and Housing intend to have floored tents in the camp meeting grounds diagonally adjoining the auditorium block, to take care of any overflow.

EXHIBIT OF THE MONROE CALCULATING AND ADDING MACHINE.

Sept. 8, 1916.

The Monroe Calculating Machine Company, with general Western office at 625 Market St., San Francisco, will be a participant in the exhibition at the "League of Municipalities" of the Monroe Calculating and Adding Machines.

This wonderful invention has a keyboard of 81 characters like the standard adding machine. These may be employed to add, subtract, multiply and divide in the most simple and direct way possible.

Addition and subtraction are direct. No set of rules to follow, no strokes to count and the operation is instantaneous.

In a problem of multiplication, the multiplicand, multiplier and product show during the operation and at its end. The advantage of this evidence is obvious.

In division, the dividend, divisor and quotient are shown during the operation. But, at the finish, the quotient and divisor alone show on the dials, the dividend having been absorbed or eliminated.

No use is made in any operation of complements of numbers—no counting of strokes. There are no levers to pull down with finger tips. Mental effort is reduced to a minimum. No loud noise. Clearing of the machine is very fast. In pro-rating, or percentage work, or where a constant is employed, the machine is not cleared after each operation, the multiplier being simply added to, or reduced, as desired.

There is no machine nearly so wonderful, so simple or so fast, as the Monroe in operations involving square or cube root.

Engineers, assessors, tax collectors and auditors should investigate the Monroe. A large number of machines are now in use throughout the United States by municipalities and our own, California, has proven quick to recognize the value of the Monroe Calculating Machine.

The League advises all delegates to give this exhibit special attention, also all visiting engineers.

THE HIGH COST OF MATERIALS.

(An interesting letter.)

MR. J. E. SUTTON, C. E.,

President of the Dept. of Engineers,

Councilman and Street Supt.,

2101 Central Avenue,

Alameda, Cal.

DEAR SIR:—

Your letter relative to the League of Municipalities meeting at Visalia is at hand.

I have been giving some thought to the program of the meeting, and am convinced that your idea of going more into details in the discussions will give better satisfaction than handling subjects in a general way.

One matter of vital interest to cities on this coast is the cost of material, and I believe it would be wise for the city engineers and street superintendents to investigate the market with the idea of obtaining data on the cost of supplies furnished the cities represented in the League.

Without question we are paying too much for certain materials, such as cement, sand, rock, brick, gravel, asphalt, road oils, sewer pipe, iron castings, tools, machinery, minor supplies, etc., commonly used by municipalities in their development.

Probably the most useful building material is cement, for which we are over-charged, I believe, from 25 to 33%. When we consider the enormous amount of cement used by the cities on this coast for street work and other purposes, there is no reason why it should not be quoted at bed-rock prices. The State Highway Commission secured a fairly low price on this material for the work they had in hand, and I understand also that large contractors are particularly favored. The cities of this State combined should receive the same discounts, as the purchases involved run into millions of dollars each year. In a lesser degree the cities are held up in their purchase of other supplies, and in many

instances pay prices in excess of what private individuals are asked. I understand that sewer pipe and iron castings are 15% higher to a city than to a contractor. The object of this is to give the contractor a chance to bid against the city, where the latter is inclined to do work by force account. A city engineer's estimate, no matter how nicely figured, based on prices quoted the city, is ordinarily much too high, because he does not have correct data as to the cost of materials, and contractors who secure work at about the figures estimated by city engineers make excessive profits.

Again, the city is sometimes forced to pay retail prices on its supplies because of the influence of certain local business interests. Palo Alto, at one time, received very favorable prices on hardware supplies purchased directly from Dunham, Carrigan & Hayden, and the Pacific Hardware & Steel Company. Local hardware companies objected to the practice of the city trading with these wholesale firms, as they wanted to handle the business at retail prices, so through some organization they influenced these companies to cease to deal with the city. Their game did not work much harm, however, in this instance, as we quickly got in touch with other concerns that would give us practically as good prices as the firms mentioned above. If we had been bottled up by local business firms, we would have suffered a very severe loss each year in the purchase of such supplies.

I believe that cities should have the very best discounts allowed, as the business is big enough to warrant it and the credit is the best. A little getting together on this proposition and standing for right prices, I think will not only pay the cities handsomely, but reimburse them many times over for the expense they incur in supporting the League of Municipalities.

Very truly yours,

J. F. BYXBEE, JR.,

City Engineer.

CITIES AFTER THE 1917 MEETING

It is reported that San Diego, San Jose and Stockton are after the 1917 convention of the League.

MODERN TAX VALUATION METHODS NEEDED —NOT NEW TAX LAWS

Equalization of the Tax Assessment Values According to Modern Analytic Methods
of Realty Valuation Offer Quickest Solution to Vexed Tax Problems
of Present Day—A New Light Dawning.

By JAMES G. STAFFORD

Consulting Tax Valuation Expert, Los Angeles

(Superintendent of the JOINT BUREAU OF APPRAISAL, Los Angeles City and County During
Entire Re-appraisal of Los Angeles County, 1915-1916.)

(Written Expressly for Pacific Municipalities.)

More money is lost annually to every city or county in the United States *before* that city or county gets it than is lost by graft, dishonesty, or inefficiency in administration after the tax collector has given the property owner his receipt for the year's tax money. It would be manifestly unfair to blame the city or county treasurer for loss of public funds, if the city or county had failed to provide the proper means to safeguard the money after it was collected.

If a city or county fails to provide its tax assessor with the proper means for obtaining all the taxes due it, through a properly equalized tax assessment, it is just as unfair to hold him to account if sufficient money is not raised under existing tax rate limitations.

STANDARDIZATION OF PROCEDURE NEEDED.

Taxation experts and investigators of the present tax problem—one of the greatest of the modern day, as it has been of the past—claim that a standardization of assessment procedure in the assessors' offices throughout the United States would result in a much more equitable distribution of the tax burden, and that plenty of money would be provided in every taxing district, with the free and self-satisfied consent of the tax-paying public.

EQUALIZATION AIM OF REFORM.

Equalization of the tax assessment, so that every property owner pays taxes in exact proportion to the value of the property owned is the sole aim of all tax reform. Levy the tax on all property,

real or personal, real estate, or improvements (whatever the policy), in proportion to a true valuation of that property, relatively to other properties in the same taxing district, and it must result in an equitable distribution of the tax levy.

CRUX OF PROBLEM.

Thus, it is apparent that the crux of the whole problem is in the original appraisal of the value of the property being taxed. Appraise property, real or personal, up to its full, true value, maintain this appraisal so there are no differences relatively, when one property is compared with another, and any tax assessment levied against it will be fair to all concerned, city and county, tax assessor, and the taxpayer himself. Best of all, this latter individual will be the most pleased party in the whole transaction, for practically every property owner is willing to pay taxes in proportion to the value of his property, if he knows his neighbor, and his neighbor's neighbor, are all getting the same treatment.

ASSESSING METHODS SLOWEST TO CHANGE.

Until recently tax assessing methods—so far as the administrative side of the work is concerned—have been changed or improved upon very little since the admonition of the Master, Jesus, to "render unto Caesar the things that are Caesar's," etc. In fact, tax valuation work in many of its phases, in most places, shows least progress or improvement of all the varied activities of the modern municipality.

THERE IS A NEW LIGHT BREAKING.

In a few cities, and towns—this does not include the biggest, most progressive, or proudest metropolitan community by any means—some distinct advance in the work of appraising real property values along more standardized lines of procedure has been made, and the taxing authorities of most places in this United States have begun to think more seriously of methods by which not only the full values of realty and improvements might be ascertained, but also of the need for greater attention to equalization of land and building valuations, relatively, and comparatively, than have heretofore obtained in most places.

MODERN ANALYTIC METHODS COME.

Modern Analytic Methods of Realty Valuation have been installed and adopted in Los Angeles County, and by the thirty-five cities and towns of that taxing district, including Los Angeles City, Pasadena, Long Beach, and others of similar size and importance, during the last year. The equalized and comparative valuations obtained through the work done in these communities form the basis for the current year's tax assessment. A recent newspaper item, in announcing the report of the County Auditor of Los Angeles, states, "The increases in property valuations have been decidedly more numerous than the decreases, but the Board (of Supervisors), and County Assessor Hopkins have expressed the opinion that the new valuations are more accurate and reliable than those of the past."

OTHER CITIES USED SIMILAR METHODS.

Prior to last year's work in Los Angeles County, and leading up to it was the very successful experiment in equalizing tax valuations in Cleveland, O., in 1910; Denver, Colo., in 1912; Des Moines, Ia., the same year, and the notable advancement in applying Modern Analytic Methods of Realty Valuation in seven Texas cities in 1913-14, also similar work done in Portland, Ore., 1914; and the adoption by the Arizona Tax Commission of similar methods in the same year. Altogether more than seventy cities and towns, and a considerable agricultural territory have been

brought under standardization, and scientific methods of land and building valuation during the last six years.

GENERAL SATISFACTION RESULTS.

In practically every instance general satisfaction has resulted. Of course, mistakes have been made, clerical errors have come to light, many protests have been filed against increased valuations by those accustomed in the past to special favors, and lower assessments, but ultimately each community, when it has had time to look into the methods employed, and judge of the equity and justice of the proceedings, and the valuations obtained through them, has settled back satisfied that at least the Assessor has made a serious effort to bring some degree of equity to the taxpayer, and applied a measure of science to his work, and that he's not such a bad sort after all.

THE JOINT BUREAU OF APPRAISAL.

A survey of the work of the Joint Bureau of Appraisal, which was organized in Los Angeles City and County early in 1915, after ordinances creating it had been passed by the Board of Supervisors and City Council, will bring conviction to the most doubtful "Thomas," that there is foundation upon which to base the statement that this county-wide appraisal, and other similar work, has been done along lines that lead to a scientific solution of this vexed question of proper tax valuations and tax assessments.

CITIZENS ASSIST ASSESSORS.

Modern methods of realty valuation for purposes of equalizing the tax assessment particularly, revolve about the analysis of land values in a committee meeting to which representative property owners, business men, real estate men, bankers, and others familiar with local conditions have been invited.

Such a committee of from fifteen to twenty know more about local values on their city streets, and block frontages, than any one individual assessor's deputy, who in the limited time at his disposal each assessing period, can do little more than guess at values, using last year's assessment to base his estimate upon.

TAXATION WITH REPRESENTATION.

Properly speaking, under the Modern Analytic Method of Realty Valuation the land is valued by the people who own it. This is done through an interchange of opinion at this committee meeting, as to what is the fair, and true value of the street frontage per foot, or the acreage value if in a rural or agricultural community.

LAND VALUE MAPS VITAL FEATURE.

Prior to the committee meeting the area to be valued is mapped in skeleton outline only. If a city or town is being appraised it has been districted into a series of sections, termed "valuation districts." The use of such maps, usually covering an area about one mile by one-half of a mile, on a 200-foot scale is what makes possible the concentration of attention of the committee on the blocks, streets, and areas of the district, and yet maintain a sort of bird's-eye view of the whole territory. The relative and comparative values of the several streets, blocks, or areas, can thus be analyzed, and those familiar with the varying conditions of the district can express opinion as to value in comparative and relative terms.

FACILITIES COMMITTEE'S APPRAISAL.

The ease and facility with which the Joint Bureau of Appraisal of Los Angeles City and County obtained the equalized appraisal of land values throughout the tremendously varied sections of Los Angeles City and County was only possible through the use of the land value maps. Each city and town, or subdivided suburban section was districted, according to a general county and city index map. These sections were drawn to an approximate scale of 200 feet to the inch, the sheets being of the uniform size of 18 x 33 inches. Positive blue prints were made of each tracing in sufficient numbers to provide each member of a committee with one. (There were 300 districts in Los Angeles City, and more than 600 in the cities, towns, and subdivided territory adjacent to the metropolis.) Similar maps on a scale of 600 feet to the inch were made up for the appraisal of agricultural and rural unsubdivided lands, committees

of farmers, ranchers, etc., supplanting the business men, bankers, etc., of the city districts.

DISCUSSION ANALYZES LAND VALUES.

Starting with the best of highest valued block frontage, the committee discussion hinges on how much this frontage is worth per foot, interior property, away from corner, and side street influences being valued. The question asked, is "What is the value of a foot of land in the middle of the block, where its value is due solely to its one street accessibility?" Proceeding from block frontage to block frontage, comparing the relative value of one with the other, studying the effect and influence on street value of such factors (or presence of people), transportation facilities, street car lines, interurban lines, and transcontinental lines, proximity to main traffic arteries, topographical features, rivers, washes, depressions, water frontage, etc., the effect of light and shade, presence of public buildings, parks, depots, etc., (character of soil, cultivability, water supply, etc., in farming properties), the committees soon arrive at an expression of true value much more dependable than any guess under the antiquated one-man system of appraising.

UNIT FOOT VALUES EXPRESSED.

Unit foot values (one foot of frontage 100 feet deep), representative of such considerations and analysis are placed on the four sides of each block. These are carefully checked, criticized in a series of meetings, and the inconsistencies are quickly picked out, rough spots smoothed over, so that an equitable distribution of street value is arrived at.

FULL VALUES ARRIVED AT.

The Joint Bureau of Appraisal made uniform efforts to obtain full values on all real estate. Full value was defined as the sum a willing seller can obtain in a reasonable time under ordinary terms and conditions. Sale prices have been considered as competent evidence, but not conclusive. Circumstances always govern any sale. It is at best the opinion of a very limited circle of persons, usually only two men, whose minds have met at a certain point.

SALES PRICES HELP—DON'T GOVERN.

The community always passes judgment on a sale price, and determines for itself whether or not a "good" buy, or an advantageous sale, has been made by one or the other of the contracting parties. Prices obtained for property sold under stress of circumstances; forced on the market through the necessity of the owner to realize quickly, or in foreclosure, are not indicative of the true value. Prices paid to obtain the last parcel necessary to complete a property for some improvement project, or for a choice location, desired for some peculiar need of the buyer are evidences of value only. The aggregate price paid for all the properties making up the holding would be a very good value of the whole. However, this value of the whole, when all its parts are assembled, would be greater than the price paid for the various parcels. This is an additional factor of value, and should be given separate judgment as plottage.

CORRECT RELATIVE VALUES AIMED FOR.

Consequently, sales as a standard of comparison for tax valuations should be carefully weighed, analyzed, and tested. Appraisals should be made so as to observe a proper relationship between the value of all lots in a block, and in like manner each block should be appraised so its value shall be relatively correct in comparison with other blocks in the district.

Thus it is possible with all members of an appraisal organization working in harmony with the central idea of *Correct Relative Values*, to appraise the various sections of a city, or county, equitably, in relationship to other sections, and to obtain the same relativity between one block and another; one section and another; one township and another; and one city and another, throughout any taxing district, county, State, or nation.

EXPERTS IN CHARGE OF APPRAISAL.

This was the plan of the field appraisal work of the Joint Bureau of Appraisal. Each committee was in charge of a member of the Bureau Staff, who supervised the meeting, directed the discussion toward important points, and generally kept in close touch with the

whole situation in the section being valued.

UNIFORM LAND VALUE COMPUTATION.

The value of separate parcels of realty, exclusive of large acreage holdings in both city and county, was computed through the application of the various rules for the computation of land values, as embraced, and exemplified in the Modern Analytic Method of Realty Valuation. In this way the value of every separate site or holding in any subdivided area of the county, was arrived at without reference to the individual owner, or his standing or influence in the community.

Given a certain area of land in a city block, affected by certain unit foot values (or street influences), as they had been appraised by the citizens' committee, the computation of the value of the area proceeds according to certain inflexible rules of mathematical calculation which in 95 per cent of the instances solves the problem of land values, after the original appraisal of the unit foot values by the committee and bureau staff.

CORNER LOT VALUES PER FORMULAE.

Corner lot values are computed through similar rules, corner tables having been prepared to care for the enhancement due to site location at street intersections. These tables have been made up for high retail business property, semi-business, and residence property classifications. The formulae upon which the corner tables are developed takes cognizance of the influence on the corner area, of the side street traffic, increased accessibility, light, air and fire protection. In the majority of cases it furnishes a satisfactory solution for the corner valuation problem, and gives the basis for proceeding in the valuation of eccentric locations, which are in the majority of cases to be handled.

TABLES FOR OTHER PHASES.

Other tables, charts, and schedules, have been perfected in the evolution of the Modern Analytic Method of Realty Valuation from the earlier efforts to establish a science of land valuation, by which a reasonable solution of valuation

problems of angular lot values, irregular shaped lots, double frontage lots, alleys, etc., is possible. Economy of time and effort, and uniformity of results has been the aim in the development of the methods. Wherever possible calculating machines, adding machines, and slide rules have been used with marked success in overcoming the difficulty of handling such a mass of items.

UNIFORM BUILDING APPRAISAL.

From the outline already given of the Modern Analytic Method of Realty Valuation, it must not be supposed that it deals only with the problem of equalization of land values. The methods employed to appraise improvements and buildings are as exact, uniform, and scientific as those applied to the problems of land valuation.

Means of properly classifying buildings, and all structures on land; for making a uniform inventory of building construction, and applying judgment as to costs of reproduction and depreciation, form the other important half of the complete work of realty valuation embraced by the methods employed.

BUILDING CLASSIFICATION AND PRICING.

The first task was the preparation of a classification covering the various types of buildings encountered, and a schedule of unit factors to fit each type. The schedule was worked up with the idea of fixing certain standards of value from which prices might be applied to like structures with the slight necessary deviation one way or the other from the standard type. The schedules were made flexible enough to allow of a certain amount of judgment on the part of the expert "pricer" employed in fixing the unit cost factors, and yet provide a definite basis for reference in case of dispute.

BUILDINGS MEASURED AND DESCRIBED.

To assist in pricing structures the mechanical data relative to construction features, the type of building, its overall dimensions, interior and exterior finish, plumbing, heating, lighting, roof, and other details were obtained by field crews equipped with a tape line, and building description blanks. Information about the age of the building, its oc-

cupancy, or any special details were also noted. With this information the "pricer" made a section inspection, judged the condition for the depreciation, applied the classification number and set down the unit cost factor, per square foot or per cubic foot, according to the classification.

ANOTHER CASE OF MATHEMATICS.

This description slip was then turned over to an office force, where the several processes of figuring the building area, cubical contents, and multiplying by the cost factor to obtain the reduplication cost of the structure today, new, were carried out. A further computation to depreciate the building for age and condition, brought the reproduction cost down to a "present value," upon which the assessment is based. There are a number of interesting details connected with building appraisal, which are purely technical, and there is no need for using space to describe them.

Sufficient has been said concerning the methods of appraising building values to indicate that this part of the work is handled as exactly, as uniformly, and as impersonally as the valuation of the individual lots and parcels of real estate.

METHOD SUPPLANTS GUESSING.

The cost of installation of such a method of appraisal may seem large at the first glance. It does require money to employ men for any work, to make over archaic methods, and set up a new system of housekeeping. This clearing the way through the jungle of guesswork obscuring tax valuation methods for these many centuries always uncovers unpleasant things, but the end justifies the effort, and the cost.

MAINTENANCE ASSURES TAX EQUITY.

Maintenance of the methods will assure tax equity to any community. It calls for the sympathetic interest of the assessing authority and his help, outside and inside his office, and the application of common sense in the use of the principles of land and building valuation as left with them after the installation of the Modern Analytic Method of Realty Valuation. Thus it becomes merely a matter of the authority in charge to

make use of the machine which has been equipped to simplify his work. This done, the taxpayers of any community where such methods are employed, will enjoy the benefits of an equalization of tax valuations, which will mean an equitable distribution of the tax burden.

MARKS A NEW EPOCH.

This in brief is the method employed in Los Angeles County and City for appraising tax values for the current year's tax assessment. Similar methods used throughout the country will bring about a new epoch in the history of each community—an epoch in which truth, justice, and the fair deal every taxpayer asks for, will come much nearer realization than under the existing conditions.

NEEDED MORE THAN NEW TAX LAWS.

Tax reform can be urged. Radical changes in policies of taxation made. The fact remains, however, that all such reforms are likely to be futile unless as a preliminary to changes in taxation policy, there shall first be established a standard of valuation that will assure equalization of values, and equity in taxation, through the ascertainment of true, provable, and proportionate values, which can be revised in the future in accordance with the same uniform procedure. This is the opportunity of the future, and to one who has given much of himself to this cause, it is gratifying to note the genuine interest officials, and public men in all departments, and businesses, manifest in such work.

WILL SHOW UP METHODS.

Word now comes that the price-fixing by the Cement Association is to be ventilated in court. A former manager of our own Oregon-Portland Cement Co. alleges that a conspiracy is afoot to overcharge the public for cement bought for roads. As he was on the inside when the so-called conspiracy was initiated, and as the men whom he accuses are men with whom he had long been associated and whom he influenced to come into the company, his accusation is to be taken seriously. Whether he would have made all these charges if the company had not ousted him from high-salaried managerial authority is beside the point. The fact of interest is that

the row is on, and that some of the methods whereby taxpayers are victimized in purchase of road materials are to be shown up.

“OREGON VOTER.”

MONEY DUE MUNICIPALITIES UNDER THE REIMBURSEMENT CLAUSE OF THE CONSTITUTION.

Considerable interest has been manifested recently regarding the right of municipalities to recover money claimed to be due under the reimbursement clause of Article XIII of the State Constitution.

The provision of the Constitution to which reference is made is apparently set forth in subdivision F of Section 14 of said Article XIII, and reads as follows:

“The legislature shall provide for reimbursement from the general funds of any county, to districts therein where loss is occasioned in such district by the withdrawal from local taxation of property taxed for State purposes only.”

There is some question as to whether the word “district” may be interpreted to include municipalities, and considerable light upon this phase of the matter may be obtained by a reference to the opinion of the Supreme Court in the recent case of Southern Pacific Co. vs. Sutter Levee District No. 1, John S. Chambers, State Controller, et al., which will be found reported in 51 Cal. Decisions at page 398. This case was peculiarly concerned with the meaning of the word “district” as that word is used in the amendment to the Constitution adverted to, and in this connection it is interesting to note that in defining the word “district” in said case much stress was placed by the briefs upon the meaning of the word “municipalities” as distinguished from the word “district.”

The matter will be taken up by the Department of City Attorneys at the annual meeting held in Visalia next month, and any cities or towns particularly interested in the matter are urged to send their attorneys to this meeting for that if for no other purpose.

SHOULD YOU PLAN YOUR IMPROVEMENT NOW?

ARTHUR L. COLLINS, Engineer, 1039 Merchants Exchange Bldg.

The general impression that the cost of construction materials has advanced to such a high value that it is not advisable to make or even consider improvements at the present time has led the writer to compare the prices as existed before the starting of the war with those of the present.

It is a fact that, generally speaking, the improvements which require the use of sheet metal or steel are seriously handicapped by the rise in prices.

On the other hand the public good or benefit may justify a purchase at the present time notwithstanding, what may seem to be a prohibitive price.

Not only have the metals advanced but the large buyer is handicapped by having to wait six months or longer for delivery. Formerly, one could make out an order and in sixty days have the goods turned out of the factory, ready for shipment.

The situation means that if you want to make an important improvement for the season of 1917 where metals are to be used, now is the time to start on the subject, and not wait with the expectation of having deliveries made in from sixty to ninety days as has heretofore been the practice. There is always the tendency to put off the discussion of a subject until the price appears to suit the pocket-book.

We have no way to tell what the price of steel will be in the future. It may so happen that people who are delaying making improvements on account of the increase of steel may find themselves further embarrassed by still higher prices.

In order to balance the increased cost of any product against the public good, a fair decision can be made only by going into the different items and determining the actual increase in dollars and cents. Recently a contract was let for a domestic water supply which cost \$100,000. The same material if it had been purchased a few months before would have cost \$80,000. These people decided that they would rather have the

use of the water and pay the additional amount than gamble with the future.

However, there are few such cases where the community can not manage along with what they have, if they believe that a margin of \$20,000 can be actually saved by waiting.

No doubt many an official will scratch his head when called upon to decide on making an improvement.

Recently there has appeared a compensation for the high cost of construction materials in that bonds have been bringing a higher figure which is important to improvements where the labor is a large factor.

This is true of irrigation work but I do not know that it makes much difference with city improvements.

The principal items of interest to the engineer are steel, wood and concrete. The increase in the price of cement for concrete in the last few months has been immaterial. Labor troubles on the water front and other causes have boosted the price of lumber about 30%. Steel has just about doubled in price. At the present time there are vexing labor troubles in the steel shops in the San Francisco locality which adds to the difficulty of obtaining steel products.

Generally speaking, the percentage increase of any work or manufactured product will depend upon what portion of the cost is labor and what portion is due to the materials that have increased in value.

Concrete and reinforced concrete.—In making concrete it is generally necessary to use a certain amount of form lumber. However, the cost of the form lumber is only a fraction of the cost of the labor to place the forms. Concrete without steel will then cost but a few percent more than in the past, probably an inconsiderable amount. In reinforced concrete it is common to use 110 pounds of steel per cubic yard. At the present time this means an increase of \$1.50 per cubic yard of concrete due to the steel. This amount and say 30 cents to take care of the rise in lumber, when added to reinforced concrete costing \$14

per yard, will show that there is a 13% rise in the original cost. It should be remembered, however, that the amount of steel considered necessary for concrete varies and it may not be necessary to use such a high percentage of steel.

Water pipe.—The light sheet steel water pipe is costing from 20 to 25% more than formerly. This value applies also to well casing. In the latter the cost of the labor is more than the cost of the casing so that the cost of a well would show only a 10% increase. The heavy water pipe will reach as high a value as 40%. Cast Iron pipe has advanced about 20%.

Wood pipe is now selling at an advance of 40% due to the advance in the price of the steel bands and the fact that the wood manufacturer is taking business that formerly went to the steel companies and can ask a better price.

Steel tanks.—The increase in the cost of a steel tank depends largely upon its size. Tanks of the size of large oil tanks where the cost of labor is small compared to the cost of the material, the increase will be as high as 60%. Formerly steel for tanks was as low as \$2.00 per 100 pounds. Its price is now about \$4.50. This means the tank that formerly cost \$5000 will now cost about \$7300, or an increase of \$2300.

Machinery.—Pumps have increased in value about 10%. Motors have increased 10 to 25%. Gas engines have increased 15 to 20%.

Corrugated culverts.—The American Ingot Iron Culvert Company announces that they have not advanced the price of their products as sold to the municipalities over former prices. This is due to their favorable contracts extending some time into the future.

Road oils.—This product has experienced a slight change due to the increase as noted by the fluctuation of crude oil.

With the high price of metals it is suggested that now is the time to unload unnecessary pieces of second hand machinery and other articles which are selling at a premium.

For water supplies, if the price of sheet metals continues to increase, the use of concrete or wood for the combination of settling basins and storage tanks will be seriously considered. The writer

is at the present time employed upon the construction of some concrete storage bins which are about 60 feet high.

Attention is called to the advantage of installing self operating pumps and motors in districts where there is inadequate pressure and water, due to the pipes being too small. The addition of a new unit will often save the construction of new mains.

It is a surprise how little attention has been paid to the use of automatic pump starters, when often a few months' service will actually save their first cost and besides tend to maintain a constant pressure and give better service.

Cities which depend upon springs and other sources for their water supply may also find it advantageous to consider a well and tap the waters that are stored below the surface rather than install new pipe lines at the present time.

At various times the writer has called attention to a new method of constructing wells. The system makes use of the principle of the open bottom well and eliminates wherever practical, the smaller slits and perforations. This is done by using different sized casings, the larger size at the top and extending down to the first sand,—then the smaller is inserted and taps the next water-bearing sand. Thus you can use a half dozen different sized casings and tap as many water bearing sands. Not only is it possible to get from 50 to 100% more water out of this kind of a well than out of the slit perforated well, but the sand trouble is eliminated. The cost of this well is even less than the other wells. In testing the well for the first time the sand is free to come out. By using a large capacity pump and pumping a few hours until the water clears, and then installing a permanent pump of a smaller capacity, the pump can be used to pump directly into the mains.

It is now up to the engineer as never before to devise ways and means for the future, making the best use of what is at hand before considering new materials.

It may not be necessary to construct along the customary lines. Very often, aside from the looks and permanency, wood for concrete or concrete for steel can be substituted and made to give the best of service.

A SURVEY OF THE NEW SYSTEM OF ACCOUNTING IN LOS ANGELES COUNTY PRESCRIBED BY THE STATE BOARD OF CONTROL

Written Expressly for Pacific Municipalities by

W. D. HAMMAN, of Los Angeles, Former Deputy City Auditor and County Efficiency Expert

There is a widespread interest in the new system of accounting, which the State Board of Control, acting under legislative enactment, is installing in the several counties of the State and which it is designed will also be prescribed for California cities.

The National Municipal League initiated the movement to secure a reform in the accounting procedure amongst the cities of the United States some twenty years ago, and it would seem fitting and proper that the "Pacific Municipalities" should take a more active interest in city and county accounting in the Pacific Coast States. In view of the importance of this subject and the general interest manifested by California officials, both city and county, an open and fair discussion of the merits or otherwise of the system of accounting prepared by the State Board of Control, is opportune and should meet a popular demand as well. The annual meeting of the League of California Municipalities is close at hand and some discussion of this subject in advance of that meeting, may prepare the way for such action as that body may desire to take in this matter.

No one at all familiar with the chaotic conditions and antiquated methods prevailing heretofore in the accounts and general fiscal affairs of even our best governed cities and counties, will question the necessity for a reform in accounting and reporting procedure. There may, however, be some difference of opinion as to the extent of changes desirable and as to the merits of the so-called Metz System, or indeed of any other system which may be proposed.

In making a "survey" of this subject, following established usage in Research Bureaus, an effort will be made to first find out "What is wrong" and endeavor to suggest the adequate remedy.

There are many ways of doing things, but as a noted "Efficiency Expert" has

well said: "There is a One Best Way, even to boil an egg." There is also a one best way to devise and install an accounting system and if the State Board of Control has found the *One Best System* it is to be congratulated; on the other hand, if it has failed in this it is open to censure.

In an analysis of this subject, it is pertinent to inquire something as to the qualifications and experience in governmental accounting of those who prescribe the system. The practical utility of the system itself, if used elsewhere is likewise important. It is also material to know whether changed local conditions may not render impractical, what has perhaps proven acceptable under ideal conditions.

WHAT IS THE STATE BOARD'S SYSTEM?

It is unfortunate, in making an analysis of this subject, that there is no published manual with which the system as installed in Los Angeles County might be compared to determine whether the finished product conforms to the plans and specifications. For two years the writer has persistently made an effort to obtain some official data in reference to this system, the most encouraging word recently given out from Sacramento is: "We are now preparing a written procedure for accounting in the various California counties."

In this connection it is perhaps not impertinent to inquire, What would be thought of an engineer or architect who builds a structure and prepares his plans afterwards?

The State Board of Control began devising a system for Los Angeles County in May, 1914. The work of installing the system began some sixteen months later, yet there is nothing of record to show that any system whatever has been officially adopted, although the Los Angeles County Charter requires such action.

Whether the system is original, or a duplication of the so-called Metz System of New York City, is not disclosed, although we are told in an official report that: "The Uniform System of Accounting for all counties has been devised upon the basis of the affairs in Los Angeles County," and also: "The State Board of Control is now engaged in installing in counties, a uniform system of accounting and when that work is completed, a similar service will be performed for the cities." This meagre information regarding the system, together with the mysterious attitude of its sponsors is not in harmony with the spirit shown elsewhere in reference to changes in accounting systems. The Metz System, before it was adopted in New York City, was submitted to all civic organizations and to a committee of expert accountants for criticism. Their approval was in substance that it was an improvement on the old system and better suited to the needs of that city. When the State Controller formulated the very excellent system of classification of all revenues and expenditures, for use in all California cities and counties, he called in an expert in the Federal service and a public accountant who had specialized in municipal accounting. Some years ago when Los Angeles City installed its accounting system, a committee of three public accountants, including the then Auditor, personally inspected the accounting systems in the chief cities of the United States and as a result that city has until recently had the best system west of the Mississippi.

Would it not have been the part of wisdom for the State Board of Control to have taken counsel and investigated the actual workings of the Metz and other systems before making a selection? The system as installed in Los Angeles County is apparently copied from the "Manual of Accounting Procedure of New York City," published in 1909, and many of the forms in use are duplications and for that reason it may have been thought unnecessary to publish the State Board of Control's so-called system. However, a system that has perhaps proven fairly satisfactory in New York City, with its two hundred million

annual expenditures and peculiar governmental conditions, is not necessarily adapted to local conditions and fiscal business of any county government, much less that of Los Angeles County.

In reference to the Metz System, I quote Dr. L. G. Powers, organizer of the U. S. Census Statistical Bureau, the father of the "Uniform Accounting" idea for governmental accounting and reporting, as follows:

"In general I agree with you in your criticism of the Metz System, so-called, and its application to your county. Considered as an essay in a new method of scientific accounting, it must receive the commendation of all who desire to see progress and perfect accounting control in governmental accounts. The same system considered as a finished product, is far from perfection. As introduced in New York City, it has been greatly modified in its details to make it fully workable. The same or allied systems introduced in smaller places, have led to legitimate demands for improvements. This was to have been expected by all practical men and is no argument against the essentials of the system, but does show the need of using good judgment in the application of any system of accounting. It also shows that no one man nor group of men, have yet solved all the problems of the best governmental accounting, but that there is, and long will be, need for scientific study and critical consideration of the subject from all points of view. The real test of the working of the system as introduced, will be the increased or decreased liability of error on the part of the average accountant in applying the system."

This "expert opinion" from a man thoroughly familiar with not only the Metz System but with all other modern governmental systems, is timely and valuable, and may well raise the question, whether the Board of Control was wise in making its selection for California counties and cities.

IS UNIFORMITY OF ACCOUNTING PROCEDURE DESIRABLE?

There is no doubt that the standardization and classification of govern-

mental receipts and disbursements is necessary for comparing the relative efficiency of a given city or county with its own previous record and with other cities and counties of similar rank. The system prescribed by the State Controller, following that used by the U. S. Federal Census is most admirable, although not perfect. However, when it comes to prescribing the same system of books, records and accounts for Los Angeles County, with its multifarious departments, activities and more or less technically trained officials, with that of, say, Alpine County, with its small population and simple governmental accounting needs, that such a thing as uniformity is impracticable. The accounting requirements of counties are as divergent as their governments, and the State Legislature found it necessary to place each of the fifty-eight counties in a class by itself and provide a County Government Act suited to each. However, the State Board of Control constructs an accounting garment for the giant Los Angeles and expects to it fit the pygmy Alpine.

A celebrated authority says:

"A machine should be designed with two ends in view: (1) To accomplish the purpose intended, and (2) to fit the ability of the one who is to use it."

An accounting system is a machine and must be constructed on the same lines to be a success. The Board of Control, instead of providing a system to meet local conditions, endeavors to make the conditions square with the system, which only invites failure.

Clerks and auditors, especially in the smaller cities and counties, are not selected for their technical knowledge of accountancy. To expect them to operate a complex "accrual system," with its numerous ledgers and controlling accounts, is unreasonable and any such system must sooner or later be modified or thrown into the discard. As well might a public accountant prescribe the complex accounting procedure of the Steel Trust for the keeper of a country store. Many technical misfit accounting systems in the commercial world have been "scrapped" to the profit of the business affected.

You perhaps have heard of the "Smith Cost System. Well, "it cost Smith more to find out what his goods cost than it did to make the goods." It might not be far from the truth to say of the Los Angeles County System that, "It takes more time to keep up the system than it does to do the work." Too much system and not enough common sense, and that "It fits like a square peg in a round hole."

THE STATE BOARD OF CONTROL AS A CIVIC DOCTOR.

There is a clear analogy between the ailments of the "body politic" and those of the body-human. Inefficiency is a disease common to all cities and counties differing only in the degree, some being in the incipient stage while others have become chronic. A good system of accounting will do much to restore civic health, if wisely applied. The State Board of Control proposes to apply the Metz System as a universal "panacea" for all city and county ailments, on the diagnosis of the case of Los Angeles County.

If the State Board of Control is to be the physician for the large family of California counties and cities, it is pertinent to inquire into its credentials and qualifications fitting it to treat governmental diseases. A somewhat extended inquiry does not disclose any certified public accountants on the accounting staff nor any who have practical experience in city and county accounting.

It is worth while to know also whether the great State of California has a model system of accounts. While it appears that several State institutions have a fair system of accounts, yet the expense and revenue, asset and liability and accrual features of the Metz System appear to be lacking. The general accounts of the State Government are kept on the "cash book system" and reports of the Controller are confined to receipts and disbursements; no balance sheet such as is found in the Metz and other allied systems is exhibited.

While the State of California is perhaps abreast of other States in its accounting, yet it is still far behind some of the chief cities within its borders.

Why did not the State Board of Control install the Metz System in the State Government and after it had proven a success, then adapt the system to counties and cities? Is it impertinent to say to the State Board of Control, "Physician, heal thyself?" What would be thought of a medical doctor who undertook to heal a patient when he was afflicted with the same ailment?

(Continued in next issue.)

AN IMPORTANT TALK ON TAXATION

One of the most interesting features of the Convention Program—for it has to do with that always present, although necessary, evil, Taxation—will be an address by James G. Stafford, of Los Angeles, a young man who has been making a considerable reputation for himself as a Consulting Tax Valuation Expert.

"Equalization of Tax Valuations on Real Properties" is the broadly reaching subject upon which Mr. Stafford will address the convention. And gentlemen, Mr. Stafford will make an address, right out from the shoulder, on his feet. There will be no drowsy reading of a paper. You will all have to be there if you want to carry his message away with you. Probably it will be illustrated with a series of stereopticon slides, and a set of charts and diagrams.

Doubtless our membership has received information from time to time during the last year of the interesting experiment in tax administration carried on by the City and County of Los Angeles from March, 1915, to April this year.

The aggressive southern California community, through its Board of Supervisors and City Council, after agreement between the two local assessors, Messrs. Hopkins and Mallard, organized the Joint Bureau of Appraisal, for the purpose of unifying the tax assessing methods throughout the City and County of Los Angeles. Joint ordinances and appropriations were passed, the details of the Bureau organization perfected by

the legal experts, and the entire matter placed under the supervision of the City and County Civil Service Commissions jointly.

Mr. Stafford was the successful candidate for the position of Superintendent, against a large field of other local men. This success was largely due to his wide experience in other States in the line of expert tax valuation service, and his very practical knowledge of Los Angeles, and California real estate values through his long residence and active connection with that line of business.

The Bureau organization was perfected by Mr. Stafford, and the work of appraising real property values throughout the area of Los Angeles County commenced in earnest May 25th, when the first property owners' meeting was held. Thereafter, and until April 1st this year, the Bureau organization swung along at its task of tremendous detail, appraising the value of some 570,000 parcels of real estate, and some 200,000 buildings, in thirty-six incorporated cities and towns, and throughout the splendidly developed agricultural and horticultural area of Los Angeles County. Always, Stafford was on the job, and he guided his organization through the difficulties always thrown before any revolutionizing effort to bring efficiency, economy, and common-sense methods into use in public affairs.

Prior to his work in Los Angeles, Mr. Stafford was one of the staff of experts in the employ of the Somers System of Realty Valuation. He had charge of similar work for the State Tax Commission of Arizona, and has had experience in Cleveland and other cities, where notable progress has been made in the administration of tax valuation work. He was formerly real estate editor of a large Los Angeles daily, and has been intimately associated with the realty business throughout California as the aggressive Executive Secretary of the California State Realty Federation, while that organization was at the height of its power during 1912-1913-1914.

With this introduction, our members attending the Convention will surely give close attention to this message on the Modern Analytic Method of Realty Valuation, which he will deliver.

THE BILLBOARD NUISANCE

(From Minnesota *Municipalities*.)

When we plan the city beautiful we provide for streets and parks, and views as splendid as the land permits. Then comes the bill poster, and erects a wall upon which to paste his monstrous lithographs. And when the citizen goes out to enjoy the attractions of nature, he is everywhere confronted with imps shouting at him that if he would chew Horse-fair Tobacco or Double-up Gum he will be happy and have no need of a good natural digestion anyway. If he prefer to look across the street, he can enlighten himself by reading of the superior merits of The Chicago Holdup Garter or of Louderstill neckties. It has never been shown that such advertising wins customers, yet it is paid for, and so the billboards are permitted to mar the scenery that might otherwise be admired, and to conceal the eyesores that might otherwise be cleaned up.

The city which sets about to rid itself of the billboard curse must proceed with great circumspection, lest it fail through attempting to abate the billboard solely on the grounds of ugliness. For although the belief is growing rapidly that the beauty of a city is a matter of public concern even as is its healthfulness and safety from fire, and as properly the subject of protecting regulation as are those, this view has not yet secured the sanction of the courts. The nearest approach to acceptance of it appears in a Federal case, in which the court recounted the objections to billboards upon other grounds, and added:

"Moreover, the views in and about a city, if unobstructed, constitute one of its chief attractions, and in that way add to the comfort and well being of its

people. Billboards for advertising purposes, erected to any great height, would undoubtedly be subject to all these, as well as other objections, and such structures are therefore plainly within the regulating power of the governing body of the city." (In re Wilshire, 103 Fed. Rep. 620.) This dictum is a recognition that aesthetic considerations might be accorded some weight in the matter, but as the case was decided upon other considerations, its value as a precedent is not to be accounted great.

State courts have refused to go even as far as this, and have rather consistently refused to uphold ordinances based upon aesthetic considerations. Chicago has perhaps as thoroughgoing a billboard ordinance as has any city in America. In upholding it in a recent case, (267 Ill. 344) the Illinois court was at pains to make clear that its decision was not based solely, or indeed at all upon aesthetic considerations. The law does not yet recognize that an offense to the eye, however unsightly, so long as it does not exceed the bounds of decency, is to be regarded as a public nuisance.

The law does recognize that the billboard may increase the danger of fire in thickly settled districts, that it may afford shelter to disorderly or criminal persons, and that it may conceal noxious deposits dangerous to the public health. In the same Illinois case these considerations were held to be valid reasons for restricting the erection of billboards. These touch the public safety, health, and morals, and so justify precautionary measures.

The Illinois court in this case upheld the rather advanced method of control

provided in the Chicago ordinance, namely, that of requiring the written consent of the owners of a majority of the frontage of any residence block before a permit may issue for the construction of billboards on that block. Thus if the residents of a neighborhood wish to keep their blocks free from the billboard evil, they have but to resist the application for a permit. It is in this direction that efforts must be directed for the time, then. What powers we have we should use with all diligence.

But we should not be content with these; we should not give up the aim of broadening the legal conception of a nuisance to include offenses to the eye as well as to the nose and the ear. Some day that is to be achieved; some day the billboard is to be outlawed. Meanwhile such restrictions should be so made upon the erection of billboards that those hereafter erected may be altogether done away with in the future. It is not not enough to require the consent of a majority of the frontage owners on a block to permit the erection of a board. In another year, or shortly more, a different set of circumstances may obtain, and a different set of residents may wish to have the billboard removed. This right should be reserved. The alteration and repair of billboards, save for very minor repairs, should be subject to the like restriction as the original construction. Such a requirement, too, may be the means by which the existing billboards could gradually be eliminated, notwithstanding the vested rights claimed to exist in them. Their construction is flimsy always. If a permit difficult to secure were required for major repairs, such as replacing posts or braces, it is conceivable that many might be removed within a very few years.

PENALIZING VIOLATORS OF THE FIRE MARSHAL'S ORDERS.

A NEW IDEA FROM SEATTLE.

The following ordinance was recently introduced in the City Council of Seattle; it is self-explanatory:

"An ordinance providing a penalty for the refusal and neglect to comply with the orders of the Fire Marshal relating to fire hazards in the City of Seattle.

"Be it ordained by the City of Seattle as follows:

"Section 1. In the event of any fire resulting directly or indirectly by reason of the refusal or neglect of any person, firm, company or corporation to comply with the written orders of the Fire Marshal relative to the maintenance, use or occupation of any premises, building or structure or in such a condition as to create a fire hazard or in violation of any ordinances of the City of Seattle relative to fire hazards, such person, firm, company or corporation shall, in addition to any other penalty that may be imposed as a punishment for violation of the ordinances of the city, be liable in civil action for the payment of the costs and expenses of the Fire Department incurred in and about the use of employees, apparatus and water in the extinguishing of any fire resulting from such cause, the amount thereof when collected to be paid into the general fund of the city."

Councilman Erickson, in commenting on the bill, said the ordinance or one very similar to it should be adopted, not because there is any likelihood that there will be any great amount of revenue accruing to the city as a result of the operation of the bill, but because property owners and tenants will take greater care in carrying out the Fire Marshal's orders, when they know that failure to do so might throw a heavy burden of expense on their shoulders.

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda received bids Aug. 15 for improving portion of Central Avenue by grading and paving. Board of Education received bids Aug. 29 for complete electric clock and program bell system to be installed in the Porter Grammar School.

Albany, Cal., has passed resolution of intention for construction of culverts.

Alhambra has voted to annex land and construct sewage disposal works and construct municipal water works at cost of \$325,000.

Anaheim will receive bids Sept. 14 for asphalt paving.

Arcadia received bids Aug. 21 for furnishing material for construction of one bridge across the wash on Duarte Road west of Santa Ana Avenue.

Auburn received bids Aug. 10 for \$25,000 municipal bonds. On Aug. 21 bids were received for 1000 barrels of Portland cement.

Benicia. The Federal Government has appropriated \$200,000 for a store house.

Chino received bids Aug. 15 for construction of a sewer system.

Coalinga is contemplating the construction of a waterworks system.

Colfax, Wash., will receive bids Sept. 18 for constructing 11 miles of highway.

Corona received bids Aug. 22 for construction of municipal water system.

Dallas, Ore., received bids Aug. 17 for reinforced concrete bridge.

Deer Lodge, Mont., received bids Sept. 5 for construction of steel bridge over Hell Gate River.

Eagle Rock will probably hold a \$60,000 bond election for construction of school buildings.

East Bakersfield will hold a \$175,000 bond election October 24 to vote bonds for a municipal water system.

Folsom has voted \$20,000 bonds for construction of sewer system.

Fresno received bids Sept. 5 for construction of an outfall sewer. Bids were received Aug. 22 for a lot of steel enameled street signs.

Great Falls, Mont. A good roads campaign is being started; it is proposed to vote \$500,000 worth of road bonds.

Hamilton, Mont., received bids Aug. 8 for two bridges in Havalli County.

Hermosa Beach has passed resolution of intention to construct a sewage treatment plant, which consists of two 100 gallon compressed air sewage ejectors with compressors and electric motors; also 8 circular cement concrete tanks 12½ feet in diameter

by 13 feet deep, electric motor, high pressure blower and the necessary pipes, etc.

Huntington Beach will improve portion of 17th Street by constructing corrugated iron culverts, concrete gas light posts fitted with gas lamps, etc., and iron pipe conduits. Several streets will be graded and paved.

Idaho Falls, Ida., received bids Aug. 18 for furnishing one street flushing machine.

Inglewood received bids Sept. 1 for two self-propelling school busses.

Lakeport received bids Aug. 12 for construction of school house.

Lindsay has decided to do more street paving. Bids will be received Sept. 12.

Menlo Park Sanitary District received bids Aug. 8 for construction of a sewer on county road near Alejandro Avenue.

Miles City, Mont., received bids Aug. 12 for construction of 120 foot steel bridge over Sunday Creek.

Modesto. Waterford Irrigation District voted \$465,000 bonds for irrigation purposes.

Newport Beach received bids Sept. 4 for improving several streets by construction of cement sidewalks.

North Yakima, Wash., will shortly vote on \$290,000 bond issue for a modern sewer system.

Oakdale has appropriated \$1800 for purchase of a fire truck.

Olympia, Wash. State Highway Commission will receive bids shortly for construction of reinforced concrete bridge on Inland Empire Highway.

Orfino, Ida., will pave several streets.

Palo Alto is preparing to vote on purchase of gas plant.

Pendleton, Ore., will hold a \$260,000 bond election in November for constructing good roads.

Placerville has adopted plans for paving Main Street.

Porterville. The Supervisors have planned a new road to Springfield. An election will be held in the near future to vote \$50,000 for a city hall auditorium.

Portland, Ore., received bids Aug. 30 for 1850 feet of 1½-inch diameter 6-12 galvanized iron cable.

Red Lodge, Mont., received bids Aug. 10 for 42-foot span steel bridge across Red Lodge Creek.

Reedley School District received bids Aug. 24 for school supplies for the ensuing year. A system of electroliers is being planned.

Richmond will receive bids Sept. 11 for a lot of sewer work.

Rio Vista has commenced proceedings for improvement of portion of Montezuma Street by paving; also for the paving of portion of Third Street, Fourth Street, Fifth Street and Sixth Street in said town.

Sacramento received bids Aug. 30 for construction of a trunk line sewer. A new fire house and municipal auditorium is being planned.

Salinas will receive bids Sept. 11 for street paving.

San Leandro has commenced proceedings for improvement of East 14th Street.

San Mateo Board of Education will hold a \$40,000 school bond election Sept. 15.

San Rafael is contemplating the construction of a fire house. A resolution has been passed for the paving and construction of three corrugated iron culverts. Bids were received Aug. 28 for construction of reinforced concrete extension of the "C" Street bridge over Mahon Creek.

Santa Monica received bids Aug. 30 for \$712,500 bonds.

Sisson received bids Sept. 1 for a lot of redwood pipe.

South Bend, Wash., received bids Aug. 22 for two bridges, one 45-foot span and the other 75-foot span.

South San Francisco received bids Sept. 4 for constructing a lot of asphalt pavement.

Spokane, Wash., received bids Aug. 10 for a new city crematory.

Springfield, Ore., is doing a lot of street work in the way of macadamizing.

Stockton received bids Sept. 5 for constructing 24 iron gates on the Stockton waterfront.

Sumner, Wash., will pave several blocks of streets.

Susanville received bids Aug. 12 for installation of sprinkling system on school grounds.

Taft has received plans and specifications for new city hall.

Tracy has voted \$19,000 bonds for fire protection and new city hall.

Tulare received bids Sept. 7 for paving several streets. The erection of a lighting system is being contemplated.

Turlock Irrigation System will hold a bond election Sept. 1 to vote \$162,478.82 to cover cost of operation and maintenance of the district.

Visalia will receive bids Sept. 11 for construction of a school house.

Walla Walla, Wash., will hold a special election to vote \$368,000 worth of water refunding bonds.

Waterville, Wash., received bids Aug. 10 for surfacing, draining and grading 4½ miles of roadway.

Whittier Union High School will receive bids Sept. 11 for furnishing materials for the Manual Arts Shop. Resolution of Intention has been passed for the paving of portion of Philadelphia Street.

Yuba City. Supervisors are contemplating the improvement of the Hall of Records.

CALIFORNIA COUNTIES.

Alameda County will receive bids Sept. 11 for construction of reinforced concrete bridge on county road.

Butte County will receive bids Sept. 8 for construction of bridge fills near the Honcut Creek Bridge.

Fresno County will hold a \$3,600,000 good roads bond election Oct. 24.

Humboldt County will receive bids Sept. 12 for construction of half mile of wagon road near Upper Mattole Post Office.

Kern County received bids Aug. 8 for grading, paving and construction of culverts on Bakersfield-Glennville Road. Bids were received on Aug. 10 for building two cellages, including plumbing, for the town of Mojave and Randsburg. Bids will be received Oct. 3 for construction of Division 4, Rio Bravo-Wasco Road. On Sept. 5 bids were received for grading, paving and construction of culverts on Bakersfield-McKittrick Road and for construction of bridge on Wasco-McFarland Road.

Lassen County will hold an election Sept. 7 for the purpose of voting on the question of forming Honey Lake Valley Irrigation District. The district comprises 30,000 acres and the estimated cost of utilizing the waters of Eagle Lake, Willow Creek, Susan River and many smaller streams is \$956,000.

Madera County received bids Sept. 6 for construction of four bridges.

Mendocino County received bids Aug. 8 for construction of new road at Salmon Creek.

San Joaquin County received bids Sept. 5 for constructing a rain water sewer.

San Mateo County received bids Sept. 5 for construction of two concrete culverts on the Middlefield Road.

Santa Barbara County received bids Aug. 21 for construction of a portion of the Harris Station Lompoc Road. Bids were received Aug. 31 for construction of reinforced concrete bridge across Romero Cañon on the Valley Road.

Siskiyou County. Union High School at Yreka received bids Sept. 1 for the installation of a steam heating plant for the gymnasium and Domestic Science Music Building.

Tehama County received bids Sept. 5 for constructing about four-fifths of a mile of macadam road.

Tulare County is contemplating the construction of a new hospital. Plans have been ordered for reinforced concrete bridge across the Tule River. An architect has been ordered to prepare plans for new county jail.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Garbage, waste and refuse matter**, providing for the disposal of and regulating the collection thereof, and providing for the keeping and disposal of fecal matter of poultry, horses and cows and fixing the compensation to be collected for collecting garbage, and providing for the letting of a contract for the collection thereof. Hayward, 1312.
- Motorcycles**, regulating the operation of on streets and providing a penalty for the violation thereof. Sacramento, 1313.
- Business, shows, exhibitions**, licensing for the purpose of revenue and regulation, fixing the rates of license tax and providing for the collection of. Livermore, 1314.
- Streets**, ordering the closing of. Oakland, 1315.
- Cemeteries**, prohibiting the establishment of. Chino, 1316.
- Bonds**, providing for the issuing of, for the acquisition and construction of a gas distributing system. Huntington Beach, 1317.
- Bonds** for municipal improvements, submitting to qualified voters. Newport Beach, 1318.
- Special election**, for framing of charter. Napa, 1319.
- Compensation of Town Attorney**, fixing of. (Amending) Sausalito, 1320.
- Lease**, making, execution and delivery of for certain real estate, salt marsh, tide and submerged lands. Alameda, 1321.
- Electric wiring and appliances**, regulating the installation of in or on buildings and providing for the inspection of. Concord, 1322.
- Alleys**, ordering improvement of. Santa Monica, 1323.
- Money**, fixing the amount to be raised by taxation, as a revenue to carry on the various departments. Dinuba, 1324.
- Fortune tellers, palmists, clairvoyants and mediums**, licensing and regulating business of. Sacramento, 1325.
- Deputies**, prescribing the number and fixing their compensation. (Amending) Santa Monica, 1326.
- Garbage, dodgers**, prohibiting dumping in city limits. Sacramento, 1327.
- Fire escapes**, providing for on buildings. Sacramento, 1328.
- Money**, fixing the amount to be raised on taxable property. Coalinga, 1329.
- Money**, fixing the amount to be raised on taxable property. Perris, 1330.
- Curb**, changing and re-establishing of. Oakland, 1331.
- Money**, appropriating out of general fund. Oakland, 1332.
- Census**, providing for and directing the taking of. Madera County, 1333.
- Money**, fixing the amount to be raised to carry on various departments. Santa Ana, 1334.
- Cast iron sewer pipe**, providing for the selling of. Stockton, 1335.
- Streets**, improving of. Whittier, 1336.
- Spur tracks**, prescribing a reasonable charge for service of, used for loading and unloading cars. Sacramento, 1337.
- Money**, fixing the amount to be raised. Hemet, 1338.
- Money**, fixing the amount to be raised. Selma, 1338.
- Money**, fixing the amount to be raised on taxable property. Angels, 1338.
- Property**, leasing of for a municipal nursery. Berkeley, 1339.
- Public Free Bureau**, for the relief of the destitute, Free Labor Bureau, Free Day Nursery, establishing of. Berkeley, 1340.

Tax rate, fixing of. Hemet, 1341.

Curb grades, establishing of. San Leandro, 1342.

Soft drinks, relating to. (Amending) Sutter Creek, 1343.

Water, regulating the hours for irrigating lawns, gardens and grounds. Pittsburg, 1344.

Taxes, providing for the assessment, levy and collection of. San Leandro, 1345.

Runners and soliciting agents, prohibiting the soliciting of patronage along public highways. Orange County, 1346.

Laundry routes, imposing a license tax on. South San Francisco, 1347.

Streets, providing for the blockading of and the preservation of fire department property during fires. Sacramento, 1348.

Meat markets and butcher shops, regulating of. Sacramento, 1349.

Fire Department automobile whistle, adopting of and prohibiting the use of whistles similar thereto. Sacramento, 1350.

Streets, regulating use of by self-propelled motor vehicles. (Amending) National City, 1351.

Assessment, providing for an independent one made by the City Assessor for the current year 1916-1917. Alameda, 1352.

Parks, regulating of. Ventura County, 1353.

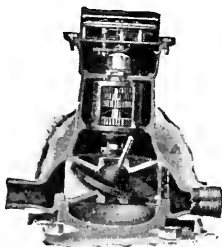
Water rates, fixing and establishing of. (Amending) Redwood City, 1354.

City Attorney, permitting him to appoint a deputy. (Amending) Santa Monica, 1355.

Street names, changing of. San Leandro, 1356.

City Attorney, relating to the appointment, duties and compensation of. (Amending) Santa Monica, 1357.

License ordinance. Monrovia, 1358.



TRIDENT DISC

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small

**Over 128,000 Made and Sold
in 1915**

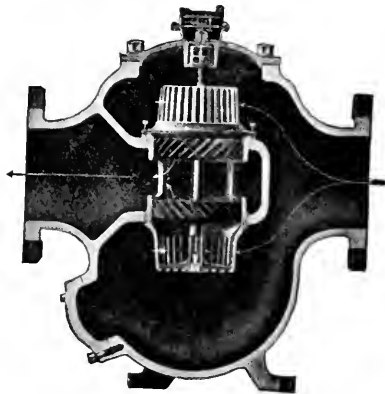
A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street



GE Street-ology GE

I make your streets brighter
your town prosperous
your homes safe
your living conditions better

I make your city more attractive
healthier
busier
cleaner

I am indispensable to a wholesome town
a "live" town
a happy town
a good town

I AM G-E LIGHT

*There is a G-E Lighting Unit for
every class of street lighting service.
Write for complete information.*

General Electric Company

General Office: Schenectady, N. Y.

Sales Offices in All Large Cities 6396

RELIABLE FIRMS

The firms mentioned below specialize in municipal work or furnishing supplies for the same. They bear a good reputation for reliability and fair dealing. In case of proposed work or needing supplies you are urged to write them. Catalogs sent on request.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Asphalt Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, California Bldg., Los Angeles.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Cast Iron Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Cement Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Concrete Mixers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

California Corrugated Culvert Co., Los Angeles and West Berkeley.

American Corrugated Culvert Co., 706 Hobart Bldg., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, 68 Sacramento St., S. F.

Flushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.
Pacific Flush Tank Company, Chicago and New York.

Gas Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Hollow Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Co., Chicago and New York.

Inspection and Tests

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Lighting Systems

General Electric Co., Rialto Bldg., S. F., and 724 S. Spring St., Los Angeles.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251 Bush St., S. F.

Ornamental Lighting Systems

General Electric Co., Rialto Bldg., S. F., and 724 S. Spring St., Los Angeles.

Pavements

Warren Brothers Co., California Bldg., Los Angeles.

City Street Improvement Co., Whittell Bldg., S. F.

Pavement Materials

Warren Brothers Co., California Bldg., Los Angeles.

Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Pressed Brick

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Road Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Scarifiers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Company, Chicago and New York.

Sewer Fittings

Pacific Flush Tank Company, Chicago and New York.

Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Corrugated Iron Culverts

Are conceded by most Engineers to be the last word in
Drainage Structures, as well as the most
Efficient and Satisfactory

When You Buy Corrugated Culverts BUY THE BEST

BUY



**"ARMCO" (American Ingot) IRON
CORRUGATED CULVERTS
99.84% Pure**



**"Culverts with a Reputation" Combining EFFICIENCY
ECONOMY, DURABILITY and STRENGTH**

California Corrugated Culvert Company

**LOS ANGELES
411 Leroy St.**

**WEST BERKELEY
400 Parker St.**

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Road Oilers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Rock Crushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Roofing Tile

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Sprinkling Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Street Lighting

General Electric Co., Rialto Bldg., and 724 S. Spring St., Los Angeles.

Street Sweepers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Testing Materials

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Water Meters

Neptune Meter Company, San Francisco and Los Angeles.

National Meter Co., 141 New Montgomery St., S. F.

Water Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Weed Killers

Atlas Preservative Company of America, Rialto Bldg., S. F.

Street Signs

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Vitrified Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

NEW YORK by Rail and Ocean

Fares Same as All Rail, But Includes Berth and Meals Five Days on Steamer

TAKE "Sunset Limited" (No Extra Fare)

FROM SAN FRANCISCO 4:20 P. M.
(Ferry Station)

Via SUNSET ROUTE to NEW ORLEANS

And There Connect With

Southern Pacific's Splendid *Ocean Liners*

Sailing Wednesdays and Saturdays to

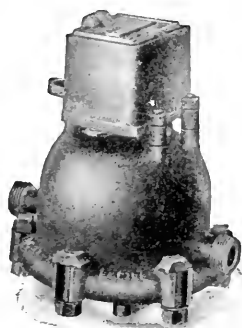
NEW YORK

For Fares and Berths
Ask Agent

SOUTHERN PACIFIC

WATER METERS

FOR ALL KINDS OF SERVICE

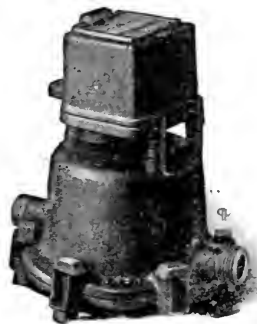


EMPIRE METER

CROWN EMPIRE
NASH GEM
EMPIRE COMPOUND
PREMIER METERS

TYPE K NASH METER

The
SIMPLEST
DISC METER



NASH METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY - ECONOMY - QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK

VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. ^{WORKS:} WEST ALAMEDA **SAN FRANCISCO**

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Los Angeles

Montreal

Mexico City

Seattle

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.

Mention "Pacific Municipalities" when writing for catalogs.

PROGRAM NUMBER

VOL. XXX.

OCTOBER, 1916

No. 10

PACIFIC MUNICIPALITIES

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES

LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES

OREGON — WASHINGTON — IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION OF THE STATE OF CALIFORNIA

PROGRAM

OF THE

VISALIA, CAL.
CONVENTION

OCTOBER 10-16, 1916

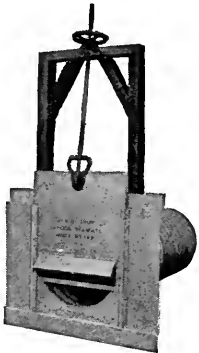
ENGINEERING * BUILDING * CONTRACTING

Publication Office
Pacific Building, San Francisco, Cal.

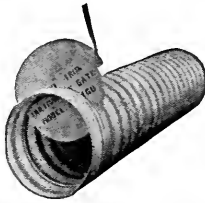
Two Dollars a Year
Single Copy 25 Cents



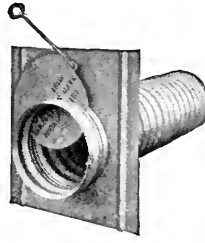
THE HOME OF GOOD
STATIONERY PRINTING BOOKBINDING
AND THE
SERVICE THAT SATISFIES



Model No. 153



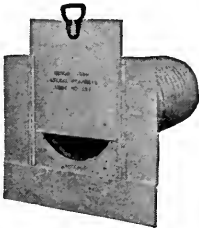
Model No. 160



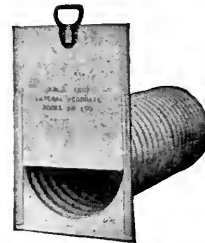
Model No. 161



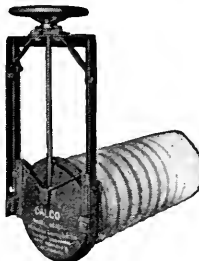
Model No. 152



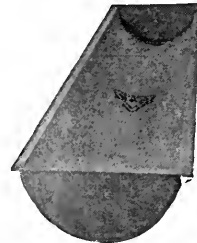
Model No. 151



Model No. 150



Model No. 101



Model No. 200



Model No. 100

He Who Installs Armco Iron PRODUCTS

Installs But Once

They Are Built to Last!

How well they are lasting, and how efficiently, economically, and satisfactorily they are caring for the drainage, irrigation, and stock feeding and watering problems is best evidenced by the fact that **ARMCO IRON** Products are in extensive use in every county in California, in an ever increasing number of municipalities, under railroads and highways, in irrigation district and farm work, etc.

We could not offer you a much better recommendation than this. We do not think you will require it.

Descriptive literature and prices for the asking. We are at your service.

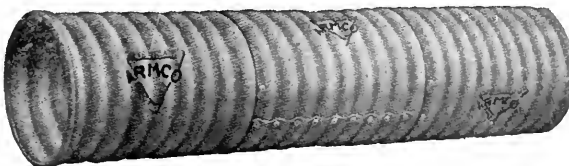
California Corrugated Culvert Company

Los Angeles
411 Leroy St.

Berkeley
400 Parker St.



Smooth Flume



Corrugated Culverts



Western Road-A-Lite

ASPHALTIC PAVEMENT

For Surfacing and Preserving
Water Bound Macadam Roads
and Concrete Pavements.

SMOOTH DURABLE
DUSTLESS MUDLESS

Initial Cost of Construction low.

Maintenance Nothing.

Adapted to all climates.

Scientifically prepared for each
locality.

Write us for information and references.

Western Motor Draying Co.

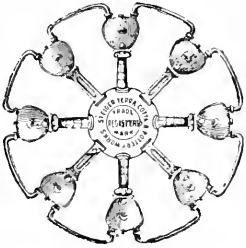
GENERAL CONTRACTORS

373 Noe Street

San Francisco, Cal.

STEIGER TERRA COTTA and POTTERY WORKS

INCORPORATED NOV. 28, 1898



Manufacturers of Architectural Terra Cotta,
Pressed Brick, Sewer Pipe, Chimney Pipe,
Flue Lining, Fire Brick, Conduit Tile, Mantel
Tile, Acid Wares and Kindred Clay Products.

Factory: South San Francisco, San Mateo Co.
Yard: 18th and Division Sts., San Francisco.

TELEPHONE DOUGLAS 3010

MAIN OFFICE
729 MILLS BUILDING

SAN FRANCISCO, CAL.

Mt. Whitney Power & Electric Co.

Welcomes the Convention's Guests
to Visalia

We invite you to use our booth when you want to
chat for a few minutes.

THIS COMPANY SUPPLIES ELECTRICITY FOR STREET
LIGHTING AND POWER FOR PUMPING TO EVERY
MUNICIPALITY IN TULARE COUNTY

WATER METERS

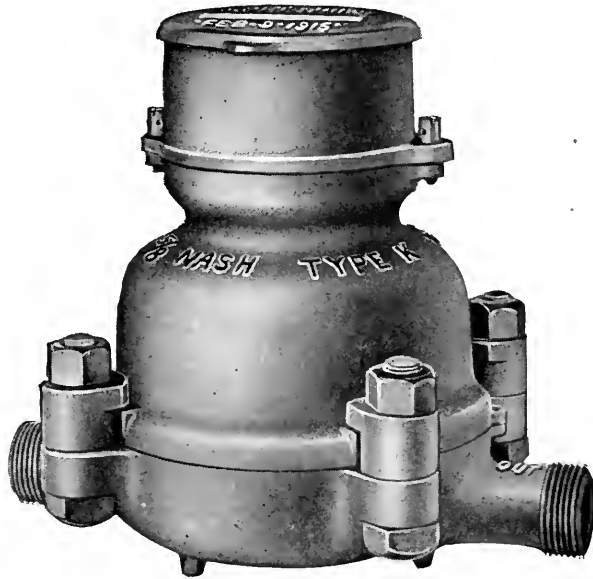
SPECIALLY ADAPTED TO EVERY KIND OF SERVICE

IN SIZES FROM $\frac{3}{8}$ INCH TO 60 INCHES

Crown, Empire, Nash, Gem, Premier Water Meters

Empire Hot Water, Oil and Gasolene Meters

Empire Compound Meters



TYPE K NASH METER

Embodies the Highest Development in Disc Water Meters
Liberal Proportions. Rigid and Simple Construction.

Extreme Accuracy on Large and Smallest Flows.

Can be Taken Apart without Removing From Service.

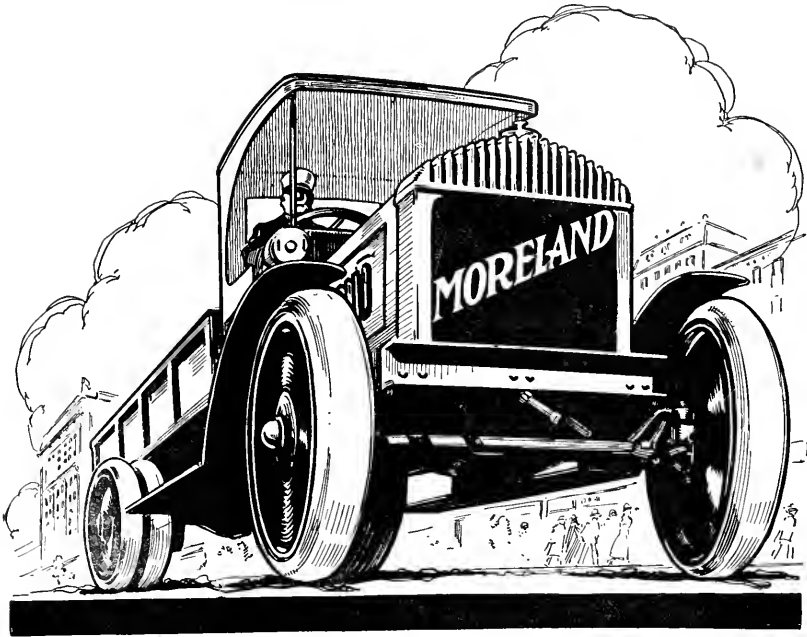
National Meter Co.

ESTABLISHED 1870

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.



For Pacific Coast Service

The **MORELAND** Distillate Truck is logically superior to any other truck built in America. It was designed by a Pacific Coast engineer to meet Pacific Coast conditions.

Only those materials which the world's greatest engineers have approved as *best* enter into its construction. No truck manufacturer can employ higher grade *materials*. And it operates on *Pacific Coast distillate* at approximately one-half the fuel cost of operating gasoline-driven trucks.

Saving one-half your fuel cost is a very important item.

MORELAND

Distillate Trucks—Worm Driven

$\frac{3}{4}$ —1 $\frac{1}{2}$ —2 $\frac{1}{2}$ —4—5 Tons

MORELAND MOTOR TRUCK COMPANY

Factory, Main Office and Salesrooms

1701-1731 N. MAIN STREET

LOS ANGELES, CAL.

Branches at

FRESNO, CAL.
SACRAMENTO, CAL.
STOCKTON, CAL.
SAN FRANCISCO, CAL.

OAKLAND, CAL.
SAN DIEGO, CAL.
SANTA BARBARA, CAL.
SAN JOSE, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

Western Pipe & Steel Company

OF CALIFORNIA

MANUFACTURERS OF

**RIVETED WATER PIPES
RIVETED STEEL PENSTOCKS
DREDGE PIPE
STEEL FLUMES
STEEL TANKS
CYANIDE TANKS
BLAST PIPE
SMOKESTACKS
CORRUGATED CULVERT PIPE
VALVES
HYDRANTS
FENCE**

WESTERN products convey the impression of a definite standard of manufacture—the highest. This is a statement of fact rather than a mere claim—a fact proved by many years of successful experience and hundreds of installations in service.

WATER, for domestic supply, irrigation or any other purpose should be carefully conserved in adequate storage, and conducted without loss or contamination to the point at which it is to be used.

WESTERN steel tanks and pipe are a sure means of achieving this end. Tightness, strength, durability and economy is assured, while the first cost is low in comparison with the service rendered.

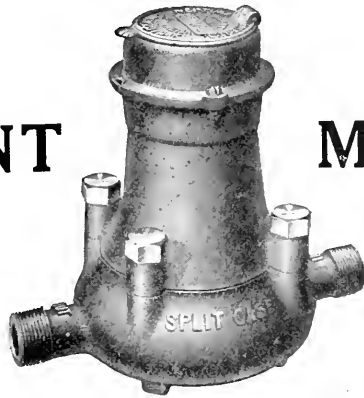
Your inquiries are solicited.

Western Pipe & Steel Company of California

San Francisco
444 MARKET STREET

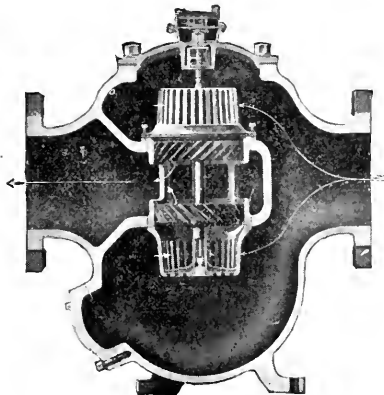
Los Angeles
1758 N. BROADWAY

TRIDENT METERS



FOR ALL SERVICES

Split Case Meters for Warm Climates
 Cast Iron Breakable Frost Bottom Meters for Cold Climates
 Hot Water and Oil Meters Crest Meters for Large Flows
 Compound Meters for all Streams, Large and Small



TRIDENT CREST

Manufactured by

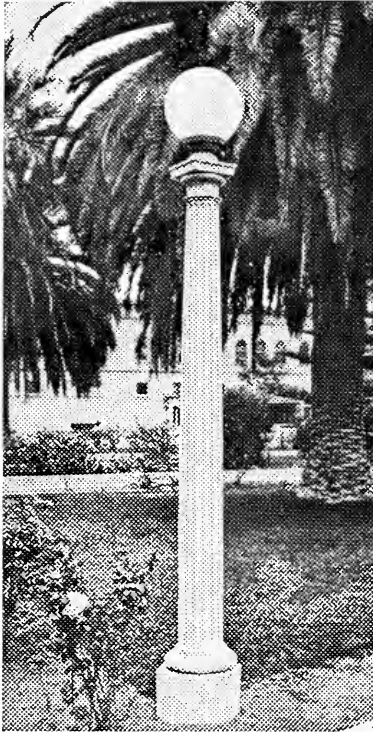
Neptune Meter Co.
 NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE, SPOKANE, SAN DIEGO

Los Angeles Office and Warehouse
 No. 411½ EAST THIRD STREET

San Francisco Office
 320 MARKET STREET

Mention "Pacific Municipalities" when writing for catalogs.



As the highest type of Reinforced Concrete Street Lighting Standard Construction, **Marbelite** presents superior ornamentation, strength and durability, as well as a saving in cost of installation and maintenance. (No Painting)

The Pacific Sales Corporation

LOS ANGELES, CALIFORNIA

DISTRIBUTORS

Factory:

33rd and Long Beach Avenue

Telephones:

F2759; Broadway, 2540

Office:

519 Union Oil Bldg.

The **MONROE** Calculating Machine Company

With general western office at 625 Market St., San Francisco, will be a participant in the exhibition at the "League of Municipalities" of the Monroe Calculating and Adding Machines.

This wonderful invention has a keyboard of 81 characters like the standard adding machine. These may be employed to add, subtract, multiply and divide in the most simple and direct way possible.

Addition and subtraction are direct.

No set of rules to follow, no strokes to count and the operation is instantaneous.

In a problem of multiplication, the multiplicand, multiplier and product show during the operation and at its end. The advantage of this evidence is obvious.

In Division, the dividend, divisor and quotient are shown during the operation, but at the finish, the quotient, and divisor alone show on the dials, the dividend having been absorbed or eliminated.

No use is made in any operation of complements of numbers—no counting of strokes. There are no levers to pull down with finger tips—mental effort is reduced to a minimum. No loud noise. Clearing of the machine is very fast. In pro-rating or percentage work, or where a constant is employed, the machine is not cleared after each operation, the multiplier being simply added to, or reduced, as desired.



Mention "Pacific Municipalities" when writing for catalogs.

AT the present time more attention is being paid to street lighting and its problems than ever before. Municipalities are realizing more than ever that good street lighting means a better, cleaner city, enhanced property values, and civic progress. It is good business to have well lighted streets—good business for merchants and property owners—good business for the city as a whole.

This growth of interest has been paralleled by activity on the part of the General Electric Company and wonderful advances have been made in both the development and application of street lighting units and apparatus. The General Electric Company has a very large engineering department, the members of which devote their entire time to the advancement of lighting problems. Mr. W. D'A. Ryan, who has done such notable work at the Panama-Pacific International Exposition, and most recently on San Francisco's "Path of Gold," is Director of the Illuminating Engineering Laboratories. A representative is maintained at each office and specifications and layouts for a scientifically correct lighting system can be obtained by request.

Some of the most recent improvements and types are on display at our exhibit at this Convention. The representative in charge will gladly give you any information on your proposed installation.

General Electric Company

Pacific Coast Offices

San Francisco

Los Angeles

Portland

Seattle

Spokane

OFFICIAL GARAGE CENTRAL GARAGE

Phone Main 49

119 West Main Street

VISALIA, CAL.

Expert Repair Work of All Kinds

SAVAGE TIRES—All Sizes in stock

Mention "Pacific Municipalities" when writing for catalogs.



GENUINE OPEN HEARTH IRON

**Corrugated Arches being installed on Central Avenue
in the City of Alameda, under the supervision of
V. M. Frodden, Superintendent of Streets
and R. H. Jamison, City Engineer**

Every User or Prospective User of corrugated iron culverts should investigate and learn of the superior, Rust-Resisting Qualities of GENUINE OPEN HEARTH IRON over other Iron and Steel Corrugated Culverts.

GENUINE OPEN HEARTH IRON Culverts are permanent and have proven The Best by Every Test—by Service Test, Purity, the Accelerated Corrosion Test, and this is why we guarantee GENUINE OPEN HEARTH IRON Culverts to last 25 years.

Write for our Price List

AMERICAN CORRUGATED CULVERT COMPANY

914 HOBART BUILDING

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

CORRUGATED IRON CULVERT SPECIFICATIONS

Culverts of corrugated iron shall be constructed of the dimensions and forms, and be located at points, shown on the plans attached hereto.

(A) QUALITY OF METALS:

Corrugated iron sheets used in the construction of the culverts shall be thoroughly galvanized with zinc spelter before being corrugated, and shall be free from imperfections of any kind and shall show no signs of cracking or blistering. All sheets shall be of U. S. Standard gauge shown on plans.

The metal composing the culvert shall contain at least 99.875 per cent pure iron, taking into consideration the following impurities: Carbon, Manganese, Silicon, Sulphur, Phosphorus, Oxygen, Hydrogen, Nitrogen and must contain not less than .2 and not over .3 of 1 per cent of Copper. A variation of not to exceed .04 per cent (4-100 of 1 per cent) in the above mentioned impurities shall be allowed covering the recognized analytical variations between expert chemists.

(B) GENERAL REQUIREMENTS:

The sheets of metal shall be sixteen (16) gauge, U. S. Standard, for pipes of diameters up to and including twenty-seven inches (27"), and shall be fourteen (14) gauge, U. S. Standard, for pipe of diameters larger than twenty-seven inches (27"), unless a greater thickness is specified in the purchase order, in which event a special price shall be agreed upon.

The corrugations shall be not less than two and one-half inches ($2\frac{1}{2}$ ") or more than three inches (3") from crest to crest and shall have a depth of not less than one-half inch ($\frac{1}{2}$ ") or more than five-eighths inch ($\frac{5}{8}$ ").

The diameter of the metal pipe shall be understood to be the clear internal diameter.

All exposed ends of corrugated culverts as shown on plans must be reinforced with a galvanized angle iron $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{4}$ " or galvanized flat band $1\frac{1}{2} \times \frac{1}{4}$ " securely riveted to the end of the pipe in a first class workmanship manner. Corrugated Arches where shown on plan shall have reinforced ends of $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{4}$ " galvanized angle iron. Where angle irons are specified for bearing points of corrugated arches, the same shall be of galvanized angle iron of size not less than $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{8}$ ".

AMERICAN CORRUGATED CULVERT COMPANY

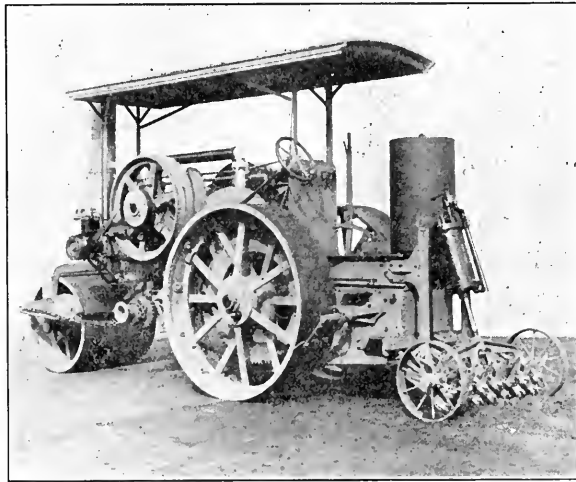
914 HOBART BUILDING

SAN FRANCISCO, CAL.

MUNICIPAL and CONTRACTORS' MACHINERY

FOR GOOD ROADS and STREETS

Street Signs, Road Machines, Road Graders, Elevators—
Portable Bunkers, Shares or Cutting Edges for all types
of Road Machines, Rock Crushers, Jaw and Gyratory
Type, mounted and unmounted.



Kelly Springfield Gasoline Roller with Scarifier attachment.

Screens, Steam Road Rollers, Gasoline Road Rollers, Horse
Rollers, Scarifiers, Harrows for Oiled Roads, Wheeled
and Drag Scrapers, Fresno Scrapers, Reversible Road
Plows, Street Sprinklers, Sprinkling Attachments,
Street Sweepers, Fibre for Street Sweepers,
Watson Dump Wagons, Asphalt
Machinery, Kettles—Hand Rollers—
Tampers, Concrete Mixers,
Hoisting Engines, Culvert
Pipe

Write us for Catalogues and Estimates

A. L. YOUNG MACHINERY CO.

26-28 FREMONT STREET

San Francisco

California

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY

**11th Floor Whittell Bldg.
166 Geary Street, San Francisco**

**PRODUCERS OF
SANTA CRUZ BITUMINOUS ROCK
THE BEST PAVING MATERIAL
IN THE WORLD**

IN A SEWER There is a Gas That Forms;

this gas makes an acid; this acid is sulphuric acid. It eats the heart out of any material known except Vitrified Salt-Glazed Clay Sanitary Sewer Pipe.

Frank H. Olmsted, Sanitary Engineer, Los Angeles, writes:

"While city engineer of Los Angeles, the cement-lined tunnel of the outfall sewer below a long stretch of inverted siphon, where the sewage was under pressure, was almost destroyed by the action of gases engendered by the pressure, the neat cement being resolved apparently into gypsum, occasioned by the union of the sulphuric acid from the sewage and the lime in the cement. In this case, owing to the size of the conduit, vitrified pipe would not have answered, but could it have been used, would have been entirely unaffected by these conditions."

**Pacific Sewer Pipe Co., Los Angeles
Manufacturers of Vitrified Clay Sewer Pipe**

Mention "Pacific Municipalities" when writing for catalogs.

THE HIBERNIA SAVINGS AND LOAN SOCIETY HIBERNIA BANK

Incorporated 1864

CORNER MARKET, McALLISTER AND JONES STREETS

ASSETS.....\$65,580,738.66
RESERVE FUND.....\$3,508,949.27

NUMBER OF DEPOSITORS 87,945

Open Daily from 10 A. M. to 3 P. M.

Saturdays from 10 A. M. to 12 M.

Open Saturday Evenings from 6 to 8 o'clock. For Deposits Only.

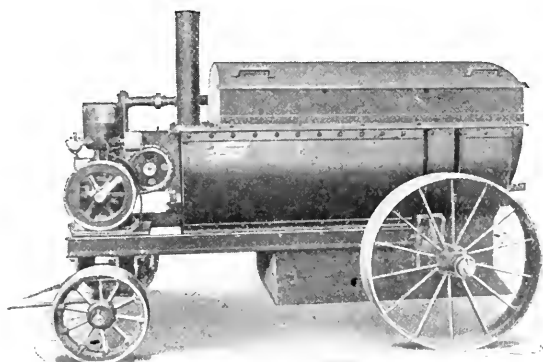
LUMBERMENS TRUST COMPANY

PORTLAND, ORE.
Lumbermens Bldg.

SAN FRANCISCO, CAL.
First Nat. Bank Bldg.

MUNICIPAL and CORPORATION BONDS

CITY OFFICIALS AND CONTRACTORS:—We are in the market for Local Improvement District Bonds issued under the "Improvement Bond Act of 1915"



KINNEY

Handy Heater and Sprayer

KANT KLOG KANT KOKE
Pump, Piping, Hose, Nozzles Automatically
Heated—No Steam Required

Contents constantly agitated while heating. No burning
or coking of material.

Especially adapted for Road maintenance, construction
and general repair work.

SEND for prices and particulars.

KINNEY MFG. CO.

California Branch:

Rialto Building, San Francisco

OFFICIAL BOOTH BUILDERS

VISALIA PLANING MILL

GENERAL MILL WORK

B. U. HEBERLING, Proprietor

Phone: Main 72
Visalia, California

Corner of East
and Center Streets

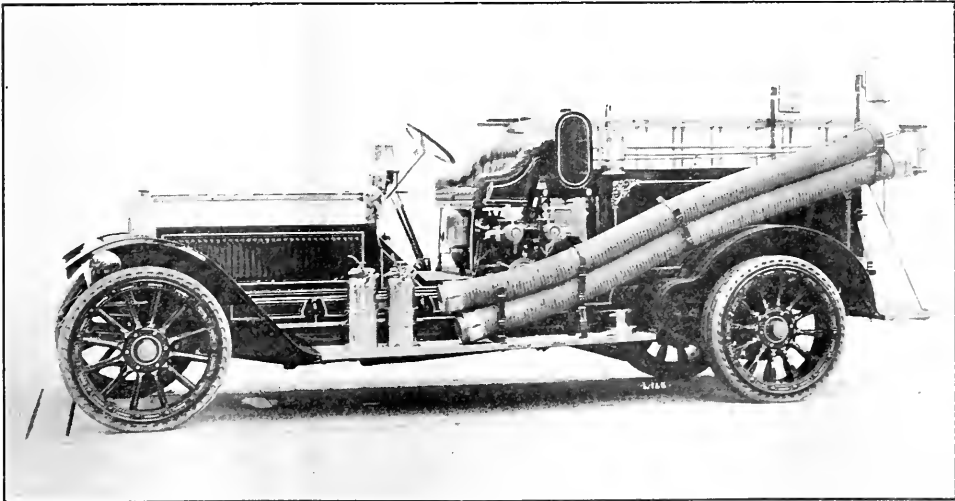
Mention "Pacific Municipalities" when writing for catalogs.

PLATE GIRDER BRIDGES FOR SALE

Three plate girder bridges, aggregating 1020 ft. in length, consisting of 56 plate girders 30 ft. long and 3 ft. deep; 40 plate girders 60 ft. long and 5 ft. deep, and steel supporting towers. Fabricated by Milliken Brothers, Staten Island, under Robert W. Hunt & Co's inspection for mill and shop. Bridges were not erected; steel is new and in excellent condition, stored near Santa Fe tracks, San Diego, Calif. Plans and specifications may be obtained upon application to Purchasing Department, San Diego Electric Railway Co., San Diego, Calif.

American-La France Motor Fire Apparatus

The Standard of the American Fire Department Service



More American-La France motor fire apparatus is sold annually than is represented by the aggregate sales of all the other manufacturers in this line in this country.

San Francisco contracts covering American La-France Motor Fire Apparatus now in construction aggregate \$141,875.00. This is additional to twenty-five machines already in service in the San Francisco Fire Department and Underwriters Fire Patrol.

American-La France Fire Engine Company of California

151 New Montgomery Street, San Francisco

Mention "Pacific Municipalities" when writing for catalogs.

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	- - - -	(City Clerk of San Diego)	- - -	ALLEN H. WRIGHT
First Vice-President	- - -	(City Attorney of Napa)	- - -	WALLACE RUTHERFORD
Second Vice-President	- - -	(Pres. Board of Public Works of Los Angeles)	- - -	LORIN A. HANDLEY
Secretary	-	H. A. MASON	Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Corcoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 10

EDITORS

H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

OCTOBER 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

ACCOMMODATIONS AT VISALIA

Arrangements have been made for the accommodation of 550 visitors at Visalia during the convention, according to the statement sent to this office by former Mayor Orr and others, therefore no one should hesitate to attend the convention through fear of a lack of suitable accommodations. The city officials of Visalia and members of the committees in charge not only guarantee first class accommodations for all who come but they promise a reception and entertainment surpassing anything done before in the history of the organization. Those desiring to reserve accommodations may do so by writing to J. F. Boyer, Secretary of the Reception Committee.

REDUCED RAILROAD FARE.

When purchasing your railroad ticket for Visalia be sure and tell the ticket agent you are going to the convention and want a return certificate. You will be obliged to pay full fare on the going trip, but the ticket agent will give you a certificate to be signed by the Secretary

of the Convention, which certificate will enable you to procure your return trip ticket in Visalia for one-third the regular fare.

REDUCED FREIGHT RATES FOR EXHIBITS.

Manufacturers and dealers intending to have an exhibit at Visalia during the convention are advised that shipments to the Exposition will be transported to Visalia at regular tariff rates, and be returned to the original shipping point free of charge, upon presentation of a certificate from the Director of Exhibits setting forth that the property has been on exhibition and not changed hands.

PAPERS NOT TO BE READ AT THIS CONVENTION.

All those on the program have been earnestly requested not to read their papers but to talk directly to the delegates from notes or from memory. Later they will have an opportunity to edit their remarks as taken down by the stenographer or have their prepared papers published in full.

THE NEW ZONE ORDINANCE OF BERKELEY

Whereas, the public interest and convenience of the City of Berkeley and the proper preservation of its public peace, health and safety require the classification of said City into districts within some of which it shall be lawful and in others unlawful to erect, construct or maintain certain buildings or to carry on certain trades, or callings, and

Whereas, to properly effect said purpose, it is necessary to enact certain definitions of districts within said City as the same are hereinafter set out.

Now, Therefore, Be it Ordained by the Council of the City of Berkeley as follows:

SECTION 1. Districts of Class I shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any purpose other than that of a single family dwelling.

SECTION 2. Districts of Class II shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any purpose other than that specified in Section 1 hereof, and that of a two-family dwelling.

SECTION 3. Districts of Class III shall be that portion or those portions of the City of Berkeley in which no building or structures shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any purpose other than those specified in Sections 1 and 2 and that of a group dwelling, each habitation of which shall have a separate entrance on the ground floor level and of which no part shall be more than two stories in height, exclusive of a finished attic.

SECTION 4. Districts of Class IV shall be that portion or those portions of the

City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any purpose other than those specified in Sections 1, 2 and 3 hereof and that of a boarding house, fraternity-house, student clubhouse or dormitory.

SECTION 5. Districts of Class V shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any other purpose except those specified in Sections 1, 2, 3 and 4 hereof and that of an apartment house, hotel, lodging house or restaurant, all without display windows.

SECTION 6. Districts of Class VI shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any other purpose except that of a building used for religious purposes or place of worship, assembly hall, public or private school, playground structure, park structure, public art gallery, museum, library, fire house or convenience station.

SECTION 7. Districts of Class VII shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be used for or designed or intended to be used for any purpose other than that of a warehouse, industry or factory not engaged in making or preparing soap, candles, fertilizer, glue, tallow, chemicals, gun powder or other explosives, or in slaughtering, bone boiling, fat boiling, tanning, dressing or preparing skins, hides or leather or used for crematory or similar purposes.

SECTION 8. Districts of Class VIII shall be that portion or those portions of the City of Berkeley in which no building or structure shall be erected, constructed or maintained which shall be

used for or designed or intended to be used for any purpose other than those specified in Section 7 hereof, and those of making or preparing soap, candles, fertilizer, glue, tallow, chemicals, gun powder or other explosives, or in slaughtering, bone boiling, fat boiling, tanning, dressing or preparing skins, hides or leather, or used for crematory or similar purposes.

SECTION 9. Private stables and garages and the usual outbuildings may be located or maintained appurtenant to any building lawfully within the boundaries of any district herein specified.

SECTION 10. Any ordinance of the City of Berkeley hereafter enacted which shall classify any property within said City as being within any district of any class of said City shall be construed as referring to the district of the class defined in this Ordinance, or any amendment hereof.

SECTION 11. Whenever the Council of the City of Berkeley shall introduce an ordinance to classify or reclassify any portion or portions of said City into one of the districts hereinabove specified, then the Street Superintendent of said City shall immediately after the introduction of said ordinance cause to be conspicuously posted along all the streets within the district affected by said ordinance notices of the introduction of said ordinances.

Said notices shall be headed "Notice of Districting," or "Notice of Redistricting" as the case may be, in letters of not less than one (1) inch in length and shall in legible characters state the fact of the introduction of said ordinance, its date and the district within which said ordinance proposes to include the territory. Said notice shall also contain a statement of the day and place when and where any and all persons having any objection to the proposed districting or redistricting may appear before the City Council and show cause why said proposed districting or redistricting should not be carried out in accordance with said ordinance. The City Council shall at the time of the introduction of said ordinance cause notice to be entered at large upon its minutes stating the said date and hour of hearing protests.

At any time not later than the hour set for hearing objections to the proposed districting or redistricting any owner of property within the proposed district may make written protest against the proposed districting or redistricting. Such protest must be in writing and be delivered to the City Clerk prior to the hour set for hearing protests. At the time set for hearing protests the City Council shall proceed to hear and pass upon all protests so made, and its decision shall be final and conclusive.

The failure of the Street Superintendent to post such notices shall not invalidate or affect the jurisdiction of the Council to finally adopt such ordinance.

SECTION 12. *Definition of Terms.* For the purposes of this Ordinance, certain words and phrases are defined as follows:

(1) *Dwellings.* A dwelling is any house or building or portion thereof which is occupied in whole or in part as the home, residence or sleeping place, either permanent or transient, of one or more human beings.

(2) *Types of Dwellings.* For the purposes of this Ordinance the types of dwellings are defined as follows:

Single Family Dwellings.

Two-Family Dwellings.

Group Dwellings.

(a) *A Single Family Dwelling* is a dwelling occupied by but one family alone.

(b) *A Two-Family Dwelling* is a dwelling occupied by but two families alone.

(c) *A Group Dwelling* is a building designed for more than one private dwelling, each private dwelling of which shall have a ground floor entrance and be entirely separated from each other private dwelling by a vertical party wall.

(3) *Boarding House.* A boarding-house is a building in which persons are lodged for hire and in which there are not more than twenty-five sleeping rooms, with or without a public dining room.

(4) *Story.* The term "story" means a vertical distance from floor to ceiling.

SECTION 13. This Ordinance shall take effect and be in force from and after thirty (30) days after its final passage.

REPORT OF THE STATE HIGHWAY COMMISSION

On July 1st, 1916, the California Highway Commission of the Department of Engineering published a Bulletin (fifth issue) which contained a balance sheet to April 15th, 1916, showing what has been done up to that date with the \$18,000,000 Bond Fund.

This bulletin contained a map of the State Highways, designating those paved, graded and surveyed (as well as reconnaissance surveys) so that the gaps may be easily picked out where work is still to be done up to perfect the system. Much useful information as well cuts and explanatory plats are also furnished.

Among other details set out regarding the \$18,000,000 bond funds are the following:

SOME STATISTICS OF THE WORK

Miles of road surveyed.....	2,280
Miles of right of way secured.....	1,705
Acres of right of way secured.....	13,327
Miles of highway constructed:	
Oiled macadam	129
Concrete pavement	933
Asphalt	33
Graded	395
	1,490
Miles of roads paved by Counties and taken over, improved and maintained by the State	108
11,750,000 cubic yards earth and rock moved at average cost of 38c.	
8,750,000 square yards concrete pavement laid at average cost of 74½c.	
1,000,000 cubic yards concrete pavement laid at average cost of \$6.64.	
143 grade crossings eliminated.	
200 miles, approximately, saved on the trunk lines.	
443 bridges secured from counties of aggregate value of \$3,450,000.	

Eliminating advance surveys and materials on hand, out of every dollar expended, 87½c went directly into the roads in materials bought at "rock bottom" prices and contracts let under keen competition.

The remaining 12½c represents every other character of expenditure including costly preliminary studies of mountain laterals, and expensive aid given to many counties.

The California State Automobile Association for the benefit, primarily, of its members, but in the interest also of all automobile owners, has had an independent investigation made of the expenditures under the \$18,000,000 Bond Fund. The technical work was done by Mr. Eric

Wold, civil engineer, who has had a long and practical experience in road building in California. A copy of his report has been mailed to every automobile owner in the territory of that Club, but will be furnished on application to any interested person (sending 2c postage for mailing). This report discloses the following findings in brief:

1. The \$18,000,000 is practically expended and instead of receiving and having a quantity of temporary macadam or oil macadam roads, we have 966 miles of *permanent* concrete and asphalt pavement and only 129 miles of temporary oil macadam.

2. We also have 395 miles of well graded dirt road which can be made into permanent highway as money is forthcoming.

3. To accomplish this great work, the Commission built up a wonderfully efficient organization. This was not done in a day or a year but by the sifting, trying out and education of the members and units at a great expense. At the present time this organization probably handles its business at a cost of one-half of what it did in the first years of its existence.

4. Great savings have been effected in mileage approximating 200 miles. Grades have been materially reduced on all mountain sections and railway grade crossings numbering 143 eliminated.

5. The State Highway Commission made a gross saving of \$500,000 on purchases and freight reductions.

6. We have examined in detail 175 contracts and find that the unit prices are all reasonable and well within the limits to be expected for the class of work required and under the various local conditions prevailing. The following are the average prices paid for the principal units of the work, including cost of materials:

ITEM	*Unit Cost per cu. yd.
Excavation, including clearing right-of-way, shaping and finishing of road-bed, watering and rolling.....	\$0.41
	per sq. yd.
4-in. Concrete Pavement.....	\$0.738
1½-in. Asphalt Wearing Surface.....	.45
¾-inch Oil Top054

*Remarks: All classes including materials.

We have examined the records of day labor contracts on 67 miles of work and find the unit costs of the work to be lower than for the same class of work let under open bidding.

7. That equipment which cost \$164,400 and now valued at \$106,800 is on hand for new work to be performed under the new Bond Issue.

8.—

REVISED STATEMENT OF EXPENDITURES

Construction Cost (Unrevised).....	\$14,284,552.11
Add for cost of handling material.....	288,000.00
	<u>\$14,572,552.11</u>
Construction Cost (Unrevised).....	\$14,284,552.11
Less 860 miles surveyed.....	\$272,620.00
Less Bridge Designs.....	15,000.00
Less handling material.....	288,000.00
Less Equipment used on construction	106,791.38
	<u>682,411.38</u>

Net Total Expenditure.....\$16,427,292.60

The net overhead then shows to be \$1,854,740.49 or 12.75% of the Gross Construction Cost of \$14,572,552.11. As before stated, considerable construction costs are still undoubtedly contained in the overhead expenses.

The Engineering Department gave certain assistance to the counties in the design and construction of bridges and in the checking and approving of numerous bridge designs submitted by the counties. After a careful investigation we believe that over \$15,000 was expended in this manner, without reimbursement from the counties.

9. In railroad work with a permanent organization, trained through a long period of years, and with a standardized practice, the average overhead is about 10%, so that the extra 2.75% is natural and lower than to be expected on public work.

10. In conclusion we would say that taking into consideration the thoroughness with which the Commission has prosecuted its work, we are of the opinion that the charge of 12.75% for overhead is a reasonable one; that the prices obtained are low and that a high standard of construction has been maintained.

If the voters of the State entrust this organization with the expenditure of the \$15,000,000 proposed by the Highway Act of 1916, to be voted on in November, the Commission may be able, because of

this organization, to make a better showing than has been made in the expenditure of the funds from the first bond issue.

On the strength of the expert report as well as other investigation made by the officers, the California State Automobile Association has resolved to endorse the passage of AMENDMENT 3 STATE HIGHWAYS ACT OF 1915, providing for a further \$15,000,000 for Good Roads, to be voted on November 7th, 1916.

Amongst many reasons that may be urged are the following:

a. The \$18,000,000 Bond Fund has been honestly and economically administered.

b. A highly efficient organization built up, tried and tested is on hand for our further use.

c. The gaps in our State Highway System must be closed to insure the fullest return on our present investment.

d. Shoulders should be provided to the present highways to insure the traveling public from present dangers.

e. Statistics show a gain of 100% in automobiles from 1912 to 1916 and mileage increased many times greater, while tire sales for the same period only increased 50% to say nothing of saving in upkeep and increased mileage per gallon of gasoline.

f. Cross roads as links to our present highways will be partly provided for out of the \$15,000,000 new bond issue—\$3,000,000 being set aside for aiding eight such links.

g. Nothing that California has done apart from the Panama Exposition has advertised it better in the East than its present highway system even in its present uncompleted condition.

Please remember that—

(1) Under Section 5 of this Act, all funds for payment of principal and interest on these bonds is provided out of the General Fund in the State Treasury, i. e., paid out of the taxes levied by the State on Corporations.

(2) Maintenance is fully provided out of taxes on automobiles which are sufficient for this purpose.

A SURVEY OF THE NEW SYSTEM OF ACCOUNTING IN LOS ANGELES COUNTY PRESCRIBED BY THE STATE BOARD OF CONTROL

W. D. HAMMAN, of Los Angeles, Former Deputy City Auditor and County Efficiency Expert

(Continued from last month)

IS THE STATE BOARD'S SYSTEM EFFICIENT?

Some two thousand years ago the "Great Teacher" said: "Ye shall know a tree by its fruits." This is the modern measure of Efficiency and it is surely not unfair to apply this test to the work of the State Board. Accountancy in its broadest sense is something more than mere bookkeeping. It includes organization, administration and operation. The ideal system comprehends something more than a maze of loose-leaf forms, registers and ledgers. To quote a high authority on this subject: "A good accounting system must be adapted to the needs of the business in question. It must provide the right kind of methods and give complete information in *quicker time at less cost*. It must provide reliable, immediate and accurate information currently as needed for the purposes of administration and operation."

If the State Board's System as installed in Los Angeles County, measures up to these requirements, it is to be commended.

At its inception the State Board's attitude was wrong. It refused the co-operation of the County Efficiency Bureau, assuming an all-wise demeanor and autocratic air, which invited antagonism where hearty co-operation was essential to real constructive work. It did not present a concise, concrete plan for adoption by the Board of Supervisors so that today there is no assurance that the system may not be discarded with a change of officials, in fact some parts have been found impractical and eliminated, already.

A scientific segregated Budget, the foundation for all modern Accounting Systems, is no part of the system, which makes it defective. There is no daily cash balance system provided for the Auditor, who must go to the Treasurer to find out the balance in any fund. The

logical result of this is many funds are continually overdrawn, these often aggregating a million and a half dollars. This evil was common under the old system, but has grown worse under the new system. The Metz System being built almost wholly around "Appropriations" is not altogether suited to a county government, and especially to Los Angeles County, where more than half the expenditures are from non-appropriation funds, such as school, road, trust and special funds created as a part of the annual tax levy and over which the Supervisors can exercise only nominal control.

A somewhat cursory examination of the system in its practical operation discloses that while the Metz System is generally followed, yet an attempt has been made to inject into the system some ideas of the designers and this has led to a most egregious error doing violence not only to the Metz System but also contrary to fundamental principles of accountancy recognized for a hundred years. I refer to the erroneous method adopted of carrying on the cash ledgers of the Treasurer and Auditor, fund balances as "Debits" and overdrafts as "Credits." Under the old system these were so kept that all balances in the several funds were "Credits," which conforms with universal practice in the best Federal, State, County and City governments. Under this erroneous method when money is deposited the fund account is "Charged" and when money is withdrawn the fund is "Credited." The Asset and Liability feature of the Metz System, under the State Board's System is reversed, an Asset becomes a Liability and a Liability appears as an Asset.

An inquiry directed to the State Controller as to his system brings the information that: "We have deemed it advisable to carry these balances as credits and personally, I see no reason for carry-

ing them in any other form, but for precise and authoritative answer, I refer you to the Accounting Department of the State Board of Control."

It appears that the State Board of Control, aside from being in error, is not consistent in prescribing accounts for Los Angeles County kept in reverse order to those in the State.

An account on the county records designated "Surplus County Funds" is an "Overdraft," thus perpetuating an error in the old system. This being an investment, for which the county holds and owns bonds, if the Metz System of Asset and Liability accounting is followed, would not appear in the cash ledgers at all but in the General or Control Ledger. Surely a system that is distorted and reversed as the State Board's System, is not calculated to inspire confidence, nor to promote efficiency.

Perhaps the most serious defect, is in the Filing System. Any system that does not provide a means of locating quickly every paper an integral part of a business transaction is not an ideal one. Under the State Board's System every expenditure is evidenced by a Requisition, Purchase Order, Delivery Certificate, Invoice and Warrant. These are each filed numerically without cross-reference, so that to trace a transaction from its beginning to final consummation is a task calculated to discourage an investigator. Hunting the proverbial "needle in a hay-stack," is simple compared with hunting a needle in half a dozen hay-stacks. Perhaps this explains the persistence with which the State Board follows up its installation with the demand that it be given the job of Grand Jury Auditor.

The pay-roll system is practically a continuation of the old system, but the useless copying of each pay check into record books defeats the prime object of a Pay-Roll system and stamps the system as grossly defective.

Many of the forms are superfluous, others such as requisitions are made in quadruplicate when duplicates would serve every purpose. The forms themselves do not conform to any fixed standard, being unnecessarily large and unwieldy, which increases the cost and encumbers the county records.

The State Board's System is predicated upon "appropriations," yet no standard form of budget is provided in the system. The Appropriation Ledgers, as assumed "checks and balances," neither check nor balance and fail to prevent over expenditures of appropriated funds, neither do they prevent the payment of claims by "Resolution" nor the transfer of funds already overdrawn or never in existence, notwithstanding the Constitution of the State and the Political Code prohibit expenditures in any year in excess of the revenues provided for that year. While possibly right in theory, yet in actual practice the system has failed to function normally, owing to lack of co-ordination between the divisions of the county government, the absence of a scientific Budget and owing to incomplete knowledge on the part of officials of the system itself.

While the system is based upon "Accruals," as opposed to receipts and disbursements of actual cash, yet the County Auditor's reports to the Supervisors show only the inflow and outgo of cash and ignores the objective features of the Metz System. As an aid to administrative judgment in securing a hundred cents worth of service for each dollar of the taxpayer's enforced tax sacrifice, the supreme test of any system, it has thus far been an absolute failure.

THE EFFICIENCY TEST.

In the final analysis of any proposition, "Results" are what count. "Efficiency is the greatest possible service, at the least possible cost." To measure Efficiency we must have a standard "Unit of comparison." The best available standard is a comparison of the costs of operating the State Board's System and its results, with the experience of the County Auditor under the old system and by a comparison with similar functions in other cities and counties, of somewhat similar conditions.

To operate the State Board's System it has been necessary to increase the Auditor's staff, always abnormally large, at least 25 per cent, and an even higher increase in expense. Under the old system the cost of auditing per unit of \$100 was 60 per cent higher than the correspond-

ing function in the City of Los Angeles and the new system instead of decreasing has augmented this unit cost.

Compared with Cook County, Illinois, having a budget and population more than two and a half times that of Los Angeles County, yet the number of employees and the expenses of conducting the State Board's System is double that of Cook County.

A comparison of the relative results of the installation in Los Angeles with those elsewhere is not favorable to Los Angeles County.

The installation of the Metz System in one division of the Comptroller's office in New York City resulted in fourteen men doing better the work of twenty-six men under the former system. The Accounting System installed in the Controller's office of Cook County, Illinois, reduced the accounting staff from 24 to 17. What a contrast with the experience in Los Angeles County.

It is not unreasonable to expect the State Board of Control's System, if it is really efficient and suited to local conditions, to give at least better results for the same cost.

To be charitable in summing up concrete facts of one year's practical working of the State Board's System in Los Angeles County, the results accomplished have not been commensurate with the costs of securing them and the system evidences few of the recognized factors that go to make Efficiency.

WHAT IS THE REMEDY?

The State Board's System has been "weighed in the balance and found wanting." The complaint has been made by the State Board that the officials charged with its operation are incompetent. Those officials may well blame the system itself. Perhaps there is merit in both contentions, but this does not improve matters.

The system as a whole is founded on sound principles, but to make it practical it must be simplified, the wastes, useless duplication, and misfit parts must be eliminated or cut down to the "irreducible minimum," and by so doing it may be possible to evolve the "One Best System" of County Accounting Procedure.

PERNICIOUS ACTIVITY OF THE CEMENT TRUST DEFEATS HIGHWAY BONDS.

A proposed one million dollar bond issue for highways was overwhelmingly defeated by the voters of Mendocino County recently on the ground that the representatives of the different cement companies had been too active in promoting the proposition.

The taxpayers throughout the State, especially in the municipalities, are aroused over the extortion practiced by the cement trust, and something should be done by the next legislature to relieve the situation.

The trust was induced to make a reasonable price to the State Highway Commission through fear that the Commission might build its own cement plants just as was done by Los Angeles in the construction of its aqueduct. Perhaps a statute authorizing the State Highway Commission to purchase cement for the municipalities and counties might result in bringing about fair prices.

LOCAL CEMENT FIRMS NAMED IN TRADE SUIT.

Portland, Ore., Aug. 29.—In a \$1,500,000 suit on file in the United States Court here today fourteen big Eastern and Canadian cement companies are charged with illegally combining, in violation of the Sherman and Clayton anti-trust acts. The action was instituted by A. N. Moore, vice-president and treasurer of the Oregon Portland Cement Company, of Oswego.

He asserts the alleged international trust seeks to control absolutely or ruin his concern, that it arbitrarily confines his production of cement to one-sixth the capacity of his plant, dictates the exact territory he may do business in, and has attempted several times to ruin him by financial machinations. It is further alleged that the combine makes Coast States pay \$1,200,000 more for cement annually than they should pay.

The following San Francisco defendants are named:

Pacific Portland Cement Company, Santa Cruz Portland Cement Company, Standard Portland Cement Company, Henry Cowell Lime and Cement Company, and a number of individuals.

THE VALUE OF WHOLE-TIME HEALTH OFFICERS

By DR. THOMAS D. TUTTLE, State Health Officer, Seattle

There are two ways of doing everything—the right way and the wrong way. So there are two kinds of health officers—old-time health officers and whole-time health officers.

The old-time health officer is a valueless health officer, and he is also an odd-time health officer, that is, he devotes his odd time to sanitary conditions, and the evidence of insanitary conditions must be very apparent to everyone before he detects them. In fact, the community usually calls his attention to the insanitary conditions in a district instead of his bringing them to their attention. He is valueless, worse than valueless to the community, because the people assume that a health officer is looking after the sanitation of his district. The old-time health officer recognizes his lack of value by accepting the office without compensation.

Some of you may remark: "They get mighty good pay for what they do." This I readily grant, for most of them get nothing and do nothing. Some get little and do less, while a few get fair salaries which they seem to consider as political plums.

I have granted the anticipated statement that most health officers are well paid for what they do. The fact is doctors do not possess divine characteristics nor satanic characteristics to a greater or less degree than do other people, and they will deliver to you, as an individual or a community, just what you pay for, no more, no less.

Now just what are the people of our State paying for part-time health officers? It would seem that this information could be easily secured, but such is not the case, as is shown by the following instance. The latter part of August, I

wrote to 298 city and county auditors in this State, asking two simple questions, namely, "What amount was paid to your health officer in salary during the last fiscal year?"—"Was this paid as a set salary or as fees?" and in order to facilitate replies I enclosed a return postcard printed in blank form so that all the writing required was, name of town or county, amount paid, the word "fees" or "salaries" and sign their name. To these 298 inquiries I received 120 replies, or approximately 40 per cent.

From cities of less than 500 inhabitants, 39 replies were received, showing that 20 out of the 39 paid no salaries or fees at all, while the average salary in towns of this class amounted to \$22.90 per year.

Twenty-eight replies were received from towns of 500 to 1,000 inhabitants. Of these 7 pay no salaries at all, while the average salary was \$56.04 per year.

Thirty-three replies were received from cities of 1,000 to 3,000 inhabitants. Of these two pay no salaries or fees, while the average salary amounted to \$120.30 per year.

Seventeen replies were received from cities of 3,000 to 15,000. Of these, one (a city of over 4,000 inhabitants, having no health officer) pays no salary or fees, while the average salary is \$289.17.

Three cities of from 15,000 to 50,000 pay an average salary of \$900 per year.

Thirty-eight counties were heard from, showing an average of \$733 per year. One pays no salary and another pays \$63 per year.

These replies would seem to indicate that we are paying \$50,700.95 per year for part-time health officers in this State, with 60 per cent of the towns yet to be heard from. But are we? I have stated that the information relative to salaries paid health officers could not be easily secured, I have indicated that approximately 60 per cent of the auditors failed to reply. The information received would indicate that the amounts stated were paid as salaries for health officers.

but as a matter of fact, in a large majority of instances, the salaries stated as the salary of county health officer indicates the salary paid the county physician and the county health officer combined. In letting the contract in these cases, emphasis is laid on the county physician's work and not on the county health officer's work. Indeed, two county health officers informed me that they did not know that the county physician's work included the county health officer's work until they came to sign the contract, and that when they objected to combining the work of the two offices under one contract, they were informed by the county commissioners that there was practically nothing to do as county health officer, and, as a matter of fact, absolutely nothing is done. It is the old time proposition of replacing the ceiling after a leak has ruined the plaster, instead of stopping the leak first. Cure is put above prevention, and as long as this is the case, there can be no prevention.

Some of you may have noted that I have not mentioned the salaries paid in our three cities of over 50,000 inhabitants. I have not done so for the simple reason that, to my mind, a city of over 50,000 inhabitants that is without a well organized board of health, a whole-time health officer and a corps of competent inspectors, corresponds to a business man who refuses to advertise because his great grandfather got along very well without doing so. If any of you gentlemen think that Seattle, for instance, is not getting value received for money spent in public health work, then I want to tell you that you are badly mistaken. If the health and life of the people of Seattle were not worth a single cent, she would still show a good balance as a result of her public health work, for Seattle is known better on account of the fact that she shows the lowest death rate of any city in the United States, than on account of any other condition connected with the city. Other cities are jealous of Seattle because of her low death rate, and you as business men know that when your competitor becomes jealous, you have him going. Spokane is rapidly coming to the front. She is cutting down her death rate every year, and if the

competent health officer of that city is given the financial and moral support he deserves, the slow ones will be as jealous of her as they are of Seattle.

Competent whole-time health officers are the cheapest advertising medium a community can have. Clean cities, sanitary surroundings and low death rates attract citizens who are looking for a home and not mere investors who hold property that increases in value at your expense.

No man engaged in the practice of medicine can make an efficient health officer. The practice of medicine is a business, and no one can conduct a successful business and at the same time earnestly endeavor to stop the source of his income. The very duties of a health officer make it impracticable for him to engage in the practice of medicine in competition with the physicians of his district. Physicians must report all communicable diseases to the local health officer, who must quarantine or placard the house where such disease exists. If the local health officer suspects the presence of a disease in his district, he must investigate. If a physician is in doubt about the nature of a case under his care, the health officer should be called in consultation. If two physicians disagree as to whether a patient is suffering from a contagious disease, the health officer's decision is final. The health officer must investigate and see that all insanitary conditions are abolished in his district. These are only a few of the duties of a health officer, but enough to illustrate my point.

Now think of a health officer with whom half of the physicians in his district are at outs (and every Mayor here knows it is not hard to find such a physician) and you will realize the situation. Cases will not be reported by other physicians, births will not be recorded, most unsatisfactory causes of death will be given on death certificates, all investigation, if he attempts them, into the nature of a case will result in hard feelings and sometimes in hard blows; and when insanitary conditions at the home of a patient of a competing physician are ordered abolished, the order is characterized as spite work and nothing is done.

Attempt to enforce reporting of communicable disease, the abolition of insanitary conditions, the compliance with quarantine by filing complaints at court, and the result is that the charge is looked on as mere spite work and the case is lost.

Now take the same health officer, employ his whole time, and things will be entirely different. He will not be in competition with the physicians of his district; there is no possible excuse for jealousy; he can not only investigate freely but the local doctors are glad to have his advice in doubtful cases. They will not only report promptly, but they will co-operate with the health officer in his efforts to improve sanitary conditions. Under such circumstances, appeals to courts are rare and when necessary, result in successful prosecutions and general improvement of sanitary conditions in the locality.

What is accomplished by such work? You are in a good locality to see for yourselves. In 1910 the city of North Yakima showed 30 deaths from typhoid fever, to say nothing of the high death rate from other preventable diseases. In 1911, the city combined with the county and employed a whole-time health officer with an efficient corps of inspectors. As a result there was one death from typhoid fever in 1914. Communicable diseases are reported promptly, the whole-time health officer is freely called by the physicians of the district in determining the nature of a suspicious case. Jealousies are abolished and the result shows that with the increased population this county shows an actual decrease of over 100 deaths per year, and these results have been accomplished under most trying conditions. In a new and rapidly growing country, irrigating ditches furnished the sole source of water for domestic purposes over a large percentage of the district, and other difficult problems had to be met. But they have been met and the results show for themselves. The people have supported a competent officer, thereby reducing their death rate 20 per cent in four years, not taking into consideration the increase in population, and if Yakima County can do this, Chelan County can reduce her

death rate 20 per cent and your county and your city can do likewise.

Prof. Fisher of Yale University has stated that it is entirely possible to prolong the average human life 15 years. He shows just what diseases can be prevented or postponed and just how much each of these shortens the average life. Nine out of 15 years are accounted for by diseases known to be preventable. Every time a life is prolonged a single year, the value of your profit sharing insurance policy is increased.

If a whole-time health officer is an asset in Yakima County, and no one who is acquainted with the facts questions this asset, it would prove an asset to Walla Walla County or your county, whatever it may be. However, in some cases under present conditions, a competent man could cover two counties, and in a few localities he could cover three counties. If the money now being expended in political plums, that often prove to be lemons, were put together, it would go a long way toward employing a few whole-time men. If public health work is worth doing at all, it is worth doing right. If it is a profitable investment it should be properly supported, but if unprofitable it should be eliminated. A cheap health officer is like a cheap dairy cow, not worth his keep, and should be gotten rid of as promptly as the competent dairyman gets rid of his cheap cow. Efficient sanitation cannot be effected with the part-time health officer.

The whole-time health officer, properly supported, means a reduced death rate, and a reduced death rate means increased value in profit sharing insurance policies. Reduced death rate indicates health and health is wealth. Low death rates and sanitary conditions mean the bringing to our State of the best class of people who are looking for homes where they may rear their children and where they may anticipate the pleasures of associating with strong, healthy, vigorous grandchildren.

The whole-time health officer means that we will be able to look any man in the eye and say our State has the lowest death rate in the world and we propose to keep it there.—"Washington Municipalities."

City Clerks

must make their report to the State Controller, and our SEGREGATION LEDGER assists you to form a report that is most acceptable to the Controller and a great time saver in preparing.

Write us regarding the Ledger and allow us to solve your Report Troubles.

Assessments

Now is the time to place your order for the CITY ASSESSMENT ROLL AND LISTS.

We are forming our annual "combination" run—and by allowing us to supply you—insures you "the Roll on time" and at the correct price.

Street Improvements

Our new forms are prepared to meet the latest changes in all STREET IMPROVEMENT ACTS.

We can furnish forms for the Act that your Charter provides, and our line of Street Improvement Bonds is legally correct.

Have you a copy of W. J. Locke's publication of Improvement Act of 1911 with Amendments, also Act of 1915?

Send for a copy as it contains valuable information.

Price - \$2.00

A. CARLISLE & CO.

Specialists in Municipal Supplies

251-259 Bush Street

San Francisco, Cal.

P R O G R A M
Nineteenth Annual Convention
of the
League of California Municipalities
Visalia, California, October 10-15, 1916

TUESDAY, OCTOBER 10, 1916

9:30 A. M. Sharp

Entire body assembled in the Municipal Auditorium

OPENING ADDRESS

President Allen H. Wright, of San Diego

WELCOME TO VISALIA

Mayor J. H. Askin

RESPONSE

Hon. Alva E. Snow, Mayor of Fresno

Report of the Secretary

ROLL CALL OF CITIES, and report from those which, since the last meeting, have had an unusual experience or have been confronted with a difficult problem which they desire to submit to the Convention. The matters submitted will be referred to the proper department for investigation and report.

"SUGGESTIONS"

Hon. John S. Chambers, State Controller

TUESDAY, OCTOBER 10, 1916

2 o'clock P. M.

Report of City Managers

NEW IDEAS REGARDING THE CITY MANAGER FORM OF GOVERNMENT

Prof. Thos. H. Reed, City Manager of San Jose

THE BUSINESS MAN AND MUNICIPAL GOVERNMENT

Lorin A. Handley, President of the Board of Public Works

ADMINISTRATION OF THE COMPENSATION ACT

C. W. Fellows, Manager of the State Compensation Fund

For the General Public

At the Pure Food Exposition

THE ADULTERATION OF FOODS AND DRUGS

(Lectures and Demonstrations)

Meyer E. Jaffa, M. S., Consulting Nutrition Expert,
California State Board of Health**TUESDAY, OCTOBER 10, 1916****8 o'clock P. M.**

Reception and formal dedication of the new \$50,000 Municipal Auditorium of the City of Visalia, followed by a grand ball.

WEDNESDAY, OCTOBER 11, 1916**9:30 o'clock A. M.**

Department of Engineers, Councilmen and Street Superintendents

THE NECESSITY OF STRICT INSPECTION AND TESTS IN STREET IMPROVEMENT WORK

Edward M. Lynch, City Engineer of Glendale

THE HIGH COST OF SUPPLIES TO MUNICIPALITIES

J. F. Byxbee, Jr., City Engineer of Palo Alto

SYSTEMATIC STREET LIGHTING

R. H. Manahan, City Electrician of Los Angeles

WEDNESDAY, OCTOBER 11, 1916**9:30 o'clock A. M.**

Department of City Attorneys

THE CITY ATTORNEY vs. THE CITY MANAGER

John F. Davis, City Attorney of Burlingame

FINANCING COUNTY HIGHWAYS WITH CITY MONEY

D. J. Hall, City Attorney of Richmond

PAVING THE COUNTY HIGHWAYS THROUGH MUNICIPALITIES

Joel H. Smith, City Attorney of Selma

REIMBURSING CITIES UNDER ARTICLE XIII OF THE CONSTITUTION

Open Discussion

WEDNESDAY, OCTOBER 11, 1916

9:30 o'clock A. M.

Department of Clerks, Auditors and Assessors

ACCOUNTING NEEDS OF A STREET DEPARTMENT

W. N. Frickstad, Assistant Superintendent of Streets of Oakland

RECORDS REQUIRED BY THE IMPROVEMENT BOND ACT OF 1915

H. A. Bewley, City Clerk of San Bruno

and

Arthur W. Studley, City Clerk of San Anselmo

WHAT A BUDGET HAS DONE FOR A SIXTH CLASS CITY

E. B. Bogart, City Clerk of Lindsay

WEDNESDAY, OCTOBER 11, 1916

9:30 o'clock A. M.

Department of Public Health

(See Special Program published elsewhere herein)

WEDNESDAY, OCTOBER 11, 1916

2 o'clock P. M.

Appointment of Committees

Engineers, Councilmen, Street Superintendents and the
Department of Public Health

THE DISPOSAL OF CITY GARBAGE

M. M. O'Shaughnessy, City Engineer of San Francisco
followed by

W. T. Knowlton, Assistant City Engineer of Los Angeles

SEWAGE TREATMENT WORKS IN CALIFORNIA

C. G. Gillispie, Director of the Bureau of Sanitary Engineering,
State Board of Health

FOUR YEARS' EXPERIENCE WITH THE IMHOFF TANK

Olin E. Seward, City Engineer of Anaheim

WEDNESDAY, OCTOBER 11, 1916

8 o'clock P. M.

(Before the entire body)

NEW IDEAS REGARDING SEWAGE DISPOSAL

City Engineer Orbison of Pasadena and T. D. Allin, Commissioner
of Public Works of that City

Illustrated with Stereopticon Views

The discussion following will be led by Prof. Charles Gilman Hyde of the
Department of Sanitary Engineering, University of California.

THURSDAY, OCTOBER 12, 1916

9:30 o'clock A. M.

Department of Engineers, Councilmen and Street Superintendents

HOW CALIFORNIA LIBRARY SERVICE MEETS CITY NEEDS

Joseph H. Quire, of the Municipal Reference Department
of the State Library

RELATION OF THE MUNICIPALITIES TO THE ENFORCEMENT OF
THE POLICE PROVISIONS OF THE MOTOR VEHICLE ACT

H. A. French, Superintendent of the Motor Vehicle Department
of the State Highway Commission

THE STATE HIGHWAYS AND THE MUNICIPALITIES

Chas. F. Stern, State Highway Commissioner

GRADE CROSSINGS

John Topham, Chairman, Public Works

THURSDAY, OCTOBER 12, 1916

9:30 o'clock A. M.

Department of City Attorneys

THE ASSESSMENT AND COLLECTION OF TAXES BY THE COUNTY

Clyde Woodworth, City Attorney of Inglewood

NEW LEGISLATION NEEDED FOR MUNICIPALITIES

Chas. N. Kirkbride, City Attorney of San Mateo

A PROPOSED NEW IMPROVEMENT ACT

Albert Mansfield, City Attorney of Redwood City

IMPROVING STREETS ON BOUNDARIES

Wallace Rutherford, City Attorney of Napa

THURSDAY, OCTOBER 12, 1916

9:30 o'clock A. M.

Department of Clerks, Auditors and Assessors

THE VALUE OF INITIATIVE IN CITY OFFICIALS

Frank Kasson, City Clerk of Palo Alto

SOME PROBLEMS OF MUNICIPAL ACCOUNTING AND THEIR
SOLUTION

M. L. Hanscom, City Auditor of Berkeley

THURSDAY, OCTOBER 12, 1916

9:30 o'clock A. M.

Department of Public Health

(See Special Program published elsewhere herein)

For the General Public

At the Pure Food Exposition

COLD STORAGE AND FOOD SANITATION

Erwin J. Lea, M. S., Director, Bureau of Foods and Drugs,
State Board of Health

THURSDAY, OCTOBER 12, 1916

2 o'clock P. M.

Department of Engineers, Councilmen and Street Superintendents with
Clerks, Auditors and Assessors

A FIELD FOR LEGISLATIVE MISSIONARY WORK IN CITIES OF THE
SIXTH CLASS

H. A. Hopkins, President of the Board of Trustees of Taft

THE POLICY OF A UNITED DEFENSE AGAINST PATENT CLAIMS

H. C. Symonds, City Attorney of Mill Valley, and
John H. Miller

EQUALIZATION OF TAX VALUATIONS ON REAL PROPERTY

James G. Stafford, Tax Valuation Expert of Los Angeles
The discussion following will be led by Clyde H. Seavey, of the
State Tax Commission

PACIFIC MUNICIPALITIES

THURSDAY, OCTOBER 12, 1916

2 o'clock P. M.

Department of City Attorneys

THE MUNICIPALITY AS A PUBLIC SERVANT

Frederick Baker, City Attorney of San Fernando

THE RIGHT OF A MUNICIPALITY TO SERVE AS CONTRACTOR IN
STREET IMPROVEMENTS

A. H. Winder, City Attorney of Riverside

ZONE ORDINANCES AND THEIR LIMITATIONS

Howard Robertson, Assistant City Attorney of Los Angeles

THE POLICE POWER AND ITS APPLICATION TO DISTRICTING AND
EXCESS CONDEMNATION, AND THE FEDERAL CONSTITUTION

F. D. Stringham, City Attorney of Berkeley

THURSDAY EVENING, OCTOBER 12, 1916

6 o'clock P. M.

A grand Spanish Banquet will be served to the delegates, their ladies and
guests, by the people of Visalia.

FRIDAY, OCTOBER 13, 1916

9:30 o'clock A. M.

Department of Engineers, Councilmen and Street Superintendents

UNFINISHED BUSINESS

NEW BUSINESS

ELECTION OF OFFICERS OF THE DEPARTMENT

FRIDAY, OCTOBER 13, 1916

9:30 o'clock A. M.

Department of City Attorneys

UNFINISHED BUSINESS

NEW BUSINESS

ELECTION OF OFFICERS OF THE DEPARTMENT

FRIDAY, OCTOBER 13, 1916

9:30 o'clock A. M.

Department of Clerks, Auditors and Assessors

UNFINISHED BUSINESS

NEW BUSINESS

ELECTION OF OFFICERS OF THE DEPARTMENT

FRIDAY, OCTOBER 13, 1916

9:30 o'clock A. M.

Department of Public Health

(See Special Program published elsewhere herein)

FRIDAY, OCTOBER 13, 1916

2 o'clock P. M.

Entire Body Assembled in the Auditorium

REPORT OF COMMITTEES

REPORT OF DEPARTMENTS

SELECTION OF THE NEXT PLACE OF MEETING

ELECTION OF OFFICERS OF THE LEAGUE FOR THE ENSUING YEAR

INSTALLATION OF NEW OFFICERS

ADJOURNMENT

HUMBOLDT SAVINGS BANK

Established 1869

783 MARKET STREET

SAVINGS=====COMMERCIAL

Capital and Surplus	-	\$1,300,000
Assets	-	9,500,000

Accounts Opened from \$1.00 Up

ALEXANDER D. KEYES	President	H. C. KLEVESAHLE	Sec'y-Treas.
WM. H. CROCKER	1st V.-President	J. S. CURRAN	Ass't Cashier
W. A. FREDERICK	2nd V.-President	P. A. PFLUEGER	Ass't Cashier

Armor Plate Safe Deposit Vaults

HOW NEW YORK CITY NOW CONTROLS THE DEVELOPMENT OF PRIVATE PROPERTY

By GEORGE B. FORD, Consultant to the Commission
on Building Districts and Restrictions

The city government of New York has just put into effect by a virtually unanimous vote of the Board of Estimate and Apportionment the radical and much-talked-of Zoning Law. All future buildings will be restricted as to their height, size and use and the restrictions will be different in different parts of the 327 square miles of the city.

Hon. George McAneny, the father of the law, said: "It is the greatest thing the city has ever done, not excepting the building of the great rapid transit system." Mayor Mitchel said that he believed that it would prevent in the future the enormous decline in property values such as had occurred below 34th Street in Manhattan. He believed that residence sections throughout the city would be protected against the sporadic store, factory or garage.

In general, the law will limit the height of buildings in proportion to the widths of the streets on which they face all the way from two and a half times the width of the street in the financial district, through two times the width of the street in central Manhattan, with one and one-half times in the balance of Manhattan and in small portions of the other boroughs, down to once the width of the street throughout all the rest of the city. A future Equitable building could only be a third as high because it faces on narrow streets, but a tower in the center of it, half as large again as the Woolworth tower, might rise to any height. The Woolworth Building on the other hand, if facing on a park, might be very nearly duplicated. The shopping district on Fifth Avenue will consist of buildings not much higher than Tiffany's, but along 42nd Street buildings may rise about as high as the Hotel Manhattan or Knickerbocker. Twelve and fourteen-story apartments will continue to go up on the main avenues and eight and nine-story apartments on the side streets, but no building of any kind can go any higher except by setting back from the street. Throughout most of the city, however, four or

five stories will be the limit. Towers may be built to any height but they cannot cover more than a quarter of the lot. Mansards, dormers and terraces are encouraged; anything that will open up the streets and bring light down into them by making the upper part of the buildings set back from the street above a reasonable height.

The size of buildings will be controlled by the fact that the law requires just so much open space on each lot. This again ranges all the way from the warehouse districts along the commercial waterfront and along the freight railways where a building may cover the whole of its lot, through the B, C and D districts, so-called, in each of which in succession a building has to provide for larger and larger yards and courts, down to the villa districts where a house can cover only 30 per cent of its lot and must be widely separated from its neighbor on at least one side. Throughout Manhattan and the densely built-up portions of the other boroughs, yards and courts in office buildings, factories, lofts, hotels, apartments, in fact all buildings, would have to be as large as those that have been required for the last fourteen years in tenement and apartment houses. Everywhere the yards and courts have to be increasingly larger at the top as a building goes up in height, so much so that these requirements tend to limit the practicable economic height of buildings even more effectively than do those directly affecting height. This is particularly true in the outlying boroughs. One important feature of the law is the encouragement it gives to playgrounds, for material concessions are allowed to anyone who will provide adequate recreational space in connection with his buildings.

Right here it is desirable to sound a note of warning. It would be most unfortunate if the law were applied as it stands to other cities, for it is full of unduly liberal provisions in the way of height and size that tend strongly to defeat the object of the law but which

were necessitated by the exceptional economic conditions of New York.

As to the use of buildings there are only two general classes of restrictions; first, the districts which are restricted against business and industry of all sorts, the so-called "residence" districts, and second, the tracts which are restricted only against manufacturing and public stables and garages, the so-called "business" districts. In the former almost any kind of building that people live in is allowed, also churches, schools, hospitals and various institutional buildings. In the business districts any residence use is allowed and even a certain small proportion of the unobjectionable types of manufacturing. The use districts have been laid down street by street and in fact block by block, depending on existing conditions and tendencies. The result has been that about two-fifths of Manhattan and about two-thirds of the whole city has been set aside for all time for strictly residential use, while the main thoroughfares, the transit streets and all other streets that are or might be appropriately used for stores or show-rooms are set aside as business streets. Many streets which are now seriously invaded by factories or garages are restricted against them from now on because it was felt that they were a distinct harm to the street. On this ground all of the central part of Manhattan above 23rd Street was made a business district despite the fact that there were already hundreds of factories employing in all upwards of 30,000 operatives within the district. This law will not touch existing factory lofts as it is in no sense retroactive, but the "Saving New York" movement, in which most of the merchants along Fifth Avenue combined to oust the factories in the neighborhood, has already succeeded in persuading almost all of the manufacturers to move away. It was a remarkable and timely vindication of the economic need of this law.

It is interesting to see how the unbroken residence districts have been becoming larger and larger at the insistence of the property owners themselves, so that in some cases of their own volition they must walk at least a mile to the nearest store of any sort. These restrictions do not interfere in any way with

existing or future private restrictions placed on any property except that if this law happens to be more drastic than the latter in any particular this law would govern.

The law will be administered by the city superintendents of buildings in each of the five boroughs and insofar as it affects tenement houses the law will be administered by the Tenement House Commissioner, while the following up of buildings after they are completed will be under the jurisdiction of the Fire Commissioner. In any case, wherever there is any question about the application of the law in a specific case, the matter can be taken to the newly constituted Board of Appeals, which is the board of review for all matters that relate to the construction or use of buildings. In addition, the law has in it a number of specific clauses giving the Board of Appeals discretion in allowing exceptions to the law.

The law itself can be changed only by the Board of Estimate and Apportionment which created it, and they can, after due notice and hearing, make amendments at any time, but if in any case 20 per cent of the property owners affected by a change object, the Board of Estimate can make the change only by a unanimous vote. There is also a clause which says that if on any street or district 50 per cent of the property owners sign a petition for a change in the map as affecting that district, then the Board of Estimate must act upon it in one way or another within 90 days. It is realized that the law and maps are not perfect and they must be changed from time to time. The provision for change is made difficult, as the whole law would be of no value at all unless property owners knew what to count on and conditions were stable.

The idea of limiting the heights of buildings has often been broached in New York but it did not come to a head until early in 1913, when Mr. George McAneny, then President of the Borough of Manhattan, asked the Board of Estimate and Apportionment to appoint a commission to consider the problem of controlling the height, size and arrangement of buildings. Such a commission of nineteen leading citizens, with Mr. Edward M. Bassett as chairman and

George B. Ford as secretary, was appointed in March of that year, and after nine months of study presented a report in which they showed conclusively that the problem was far bigger than one of merely limiting the maximum height of buildings as that would affect only a small section of lower Manhattan. To that end they recommended two charter amendments which would permit the Board of Estimate and Apportionment to restrict the use of buildings, their height and the sizes of their yards and courts differently in different parts of the city. These charter amendments were passed in May, 1914, and a month later the Board of Estimate and Apportionment appointed a Commission on Building Districts and Restrictions of seventeen members with Edward M. Bassett as chairman and Robert H. Whitten as secretary, to carry the work through to consummation.

This Commission found that the first thing that it was necessary to do was to become thoroughly conversant with existing conditions and tendencies with regard to all property and improvements, the character and intensity of their use, all natural physical conditions as they affected property, and the distribution of the use and effect of public utilities. An intensive study of present and future rapid transit and the distribution of population in New York was made for the Commission by John P. Fox and Herbert S. Swan. Frank B. Williams made two trips to Europe to study the effect of the districting and zoning laws there.

A detailed study was made of what other American cities have done toward controlling the height, size or use of their buildings, but as no city had begun to approach the subject in a comprehensive way, the Commission found it necessary to go back to fundamentals. The first year was spent in collecting this data and getting it into form for use. Meanwhile the Commission and its staff were trying out every possible suggestion for controlling the size or use of buildings and the practicableness of various possible kinds of districts. It was a long process of elimination in which everything that would not work was discarded. The Commission held innumerable conferences and in all some

sixty public hearings. They made a point of getting in touch with everyone who, through his experience or knowledge, they felt could assist in arriving at a practicable result. They went out continually to meetings of local groups in the various parts of the five boroughs as well as inviting people who were conversant with local conditions constantly at the office. The result is that the law as passed is not the work of a limited group of men but is the result of the combined thought of thousands of people from all parts of the city. The work of the two commissions is being summed up in a final report which will be completed within a few months. Meanwhile the law with the accompanying maps as enacted, has already been published.

Despite the preponderating sentiment in favor of the plans as finally adopted and the almost unanimous feeling that districting was desirable, it was realized that the law or some parts of the maps might be taken into the courts. As the law will be administered under the police power of the State, without compensation to property owners when they may feel that they are damaged, the Commission felt that it was highly important that the law and the district lines should be such as the courts would be likely to uphold as a proper exercise of the police power. Constantly the Commission wanted to be more drastic than they were, but they restrained themselves as they felt that it was far more important to plan a law which would be likely to be upheld by the courts rather than to secure all they felt desirable with the possibility of the whole law being declared unconstitutional. Recent discussions in the Supreme Courts of the various States of the United States and particularly in the Supreme Court of the United States have given a remarkable impetus to the controlling of the development of private property along the lines which this law lays down.

The Commission constantly asked itself, "Will this particular feature of the law or will this particular district line tend to improve health, safety and general welfare?" And as one goes through the various parts of New York and examines in detail what the Commission has done he can study out the helpful effect it is bound to have: he

can see what it is going to mean in relieving the inconvenience, danger and unhealthfulness in the rapid transit systems of the city, particularly in the central portion of Manhattan. It can be seen how it will tend to relieve undue congestion among the tall buildings of the city; how it is bound to improve business districts by keeping the factories out; how it is going to have a wonderful effect on family life, health, general welfare; how it will preserve the residential parts of the city and protect them against the invasion of business, factories and garages, and how it will show how everywhere at least a reasonable degree of light and air will be available for every building.

Another thing which the Commission kept continually in mind was the necessity of conserving real estate values. There were a number of leading real estate men on the Commission and they insisted constantly that real estate values must not be jeopardized and wherever possible that they should be enhanced. They soon found that that which was to the interest of the community from the standpoint of public health, safety and general welfare was also an advantage from a real estate standpoint, so the two points of view—human and business—have gone on together, side by side, working to a common end.

The whole problem is related very closely to the rapid transit problem; in fact, to all the other features of the city plan. It has been borne in continually upon the Commission that districting without comprehensive city planning left the job only half done and that as various new streets or parks were laid out, or new transit lines opened up, or terminal features planned, they would change the districts in their neighborhoods. It was a matter of great regret that it was not feasible in this case to carry on both the general planning and districting at the same time.

In the various reports of the Commission nothing whatever has been said about the effect of the new law on the appearance of the city and yet within the next twenty-five or fifty years it is bound to make the city far more orderly and even more beautiful. It has been said that it would spoil the glorious skyline of New York and rob the city of its

“crowning glories.” But so far from doing that, I am convinced that the sky-line of New York some twenty-five or fifty years from now will be far more wonderful than anything we have yet dreamed of, for the law is full of special provisions which are bound to encourage the erection of towers, mansards, dormers, terracing roofs of a variety and interest far different from anything which this country has yet seen. More immediately, it will put order and harmony into the streets of the city, particularly the residential streets. It will tend to prevent the streets from being broken up as they are now.

Ultimately one of the greatest effects of all will be the effect which it is bound to have on family life and citizenship, for as the character of neighborhoods become assured families will begin to settle down in one place instead of constantly shifting about as they do now. Localities will be formed, neighborhood spirit will grow; social and community consciousness will develop and people as groups will take more and more interest in the affairs, both social and civic, of their neighborhood.

The result is bound to be, as it always has been under similar conditions, that just in proportion as people do take more interest in their surroundings they contribute more to the direction of the control of these surroundings. In that way a civic spirit and citizenship is built up and in that way this new law is bound to contribute to better family life and better government.

WANTED

Position as City Engineer or City Manager or both, by competent graduate engineer, wide experience, now employed as City Engineer and Manager. Desire larger City.

Address

Pacific Municipalities

"THANK-YOU-MARMS" FOR GRADE CROSSINGS

"Thank-you-marms" to protect railway grade crossings are now a reality, for Fulton Lane, President of the Los Angeles Board of Public Utilities, and the man whose appointment to fill the next vacancy on the State Railroad Commission is being urged in southern California, is now leading the grade crossing protection movement in Los Angeles County, in an effort to cut down the 4900 grade crossing deaths reported each year to the Interstate Commerce Commission.

In an effort to co-operate with the State Railroad Commission in the protection of dangerous crossings, Lane has instructed the Board of Public Works of Los Angeles to place a "thank you marm" at the crossing of the Pacific Electric four-track line and Mission Road on the busiest boulevard between Los Angeles and Pasadena.

A bump will be constructed fifty feet on each side of the railway tracks to force automobiles to slow down to eight miles an hour in running over this dangerous crossing.

The construction of a series of checks on each side of railway grade crossings to protect speeders against themselves, has been advocated both by members and engineers of the State Railroad Commission and by officials of the Automobile Club of southern California. Until this time, however, no public official has taken definite action to try out this method of crossing protection.

Some days ago S. A. Bishop, general claim agent of the Pacific Electric, addressed a letter to the State Railroad Commission and to the Board of Public Utilities, suggesting that an experiment along this line be tried, and Lane, in order to try out the proposed plan at once, decided on the most dangerous crossing in the City of Los Angeles for the test.

According to the plan outlined, speed data will be taken at this crossing before the bump is installed, and additional investigation will be made after

the work is done, in order to determine the value of the innovation.

Several construction methods are suggested, either the construction of a bump or a dip in the road or the building of a sand pit, which would force automobilists to go into the intermediate gear.

Lane, who was one of the builders of the Los Angeles aqueduct, and who has just completed for the City of Los Angeles the presentation of the most important rate case ever heard before the Railroad Commission, said in his letter of instructions to the Board of Public Works: "The Pacific Electric has four tracks crossing Mission Road at Rose Hill at an oblique angle. Many obstructions to a clear view of the tracks have been removed. Warning bells and wig-wags have been installed. Still this remains a very dangerous crossing, and a menace to life hardly equaled in the city, on account of the sharp angle and the careless disregard of automobile drivers to the warning signals.

"The more accustomed automobile drivers become to this crossing, the more careless they are to its warning signals, and the more chances they take in attempting to beat the trains to and across this grade crossing.

"Many cities and counties have put in checks, such as dips and bumps to stop speeding, and only recently this county issued a permit to an individual owner to put such check in front of his property on one of the county boulevards.

"This method seems to have proved a successful method of putting a check to speeders. I believe it would make for greater safety at railroad crossings. Checks on Mission Road would have to be located some fifty feet from the railroad right-of-way, and in the street over which your Board has jurisdiction. Such checks, on both sides of this crossing, would be a comparatively inexpensive experiment, and one that merits a fair trial."

Greater Municipal Efficiency

IS OBTAINED BY USING

The Addressograph and The Mimeograph

These labor saving devices will address your water, electric light and gas bills—pay rolls, warrants and mailing lists—print your circular letters, notices—office forms, etc., at a saving of 80%.

**SEE THEM IN ACTION
AT THE CONVENTION AT VISALIA**

H. S. CROCKER CO.

Los Angeles

San Francisco

Sacramento

GRANT ROCK AND GRAVEL CO.

**CRUSHED ROCK
WASHED GRAVEL**

FRESNO - - - CALIFORNIA

National Septic Process Protective League

F. G. PIERCE, Secretary, Marshalltown, Iowa

For the short time that the National Septic Process Protective League has been organized, very satisfactory headway has been made in completing an organization, and the League will soon be in shape to defend any suit or suits brought by the Cameron Septic Tank Company for claimed infringement of the patents controlled by that company.

The first effort of the officers was directed toward securing an organization, it being the desire to secure members of the Board of Directors for each State, who would represent the municipalities of that State, and be interested in the defense of any suits brought by the Cameron Company.

Nearly all of the different State leagues of municipalities have agreed to co-operate and have appointed one of their officers as a member of the board. In those States not having State leagues the State Board of Health and well-known sanitary engineers have accepted an appointment.

At the present time the officers of the League are as follows: President, Dr. H. M. Bracken, Executive Officer, State Board of Health, St. Paul, Minn.; Vice-President, A. Elliott Kimberly, Consulting Engineer, Columbus, Ohio; Secretary-Treasurer, Frank G. Pierce, Secretary, League of Iowa Municipalities, Marshalltown, Iowa; Executive Committee, A. Marston, Dean Engineering Department, Iowa State College, Ames, Iowa; C. A. Haskins, Engineer State Board of Health, Lawrence, Kans.; Paul Hansen, Engineer State Board of Health, Springfield, Ill.; Wm. J. Locke, Secretary League of California Muni-

icipalities, San Francisco, California; W. P. Capes, Secretary New York Conference of Mayors, Albany, N. Y.

The following have become members of the Board of Directors: Arkansas, Guy A. Watkins, Consulting Engineer, Little Rock; California, Wm. J. Locke, Executive Sec'y League of California Municipalities, San Francisco; Clas G. Hyde, Con. Eng., Calif. State Board of Health, Berkeley; Illinois, Paul Hansen, Eng. State Board of Health, Springfield; Langdon Pearce, Engineer, Chicago; Iowa, Hon. J. F. Cole, Pres. League of Iowa Municipalities, Oelwein; Lafayette Higgins, State Sanitary Engineer, Des Moines; Kansas, C. A. Haskins, Eng. State Board of Health, Lawrence; C. H. Talbot, Sec'y League of Kansas Municipalities, Lawrence; Maryland, Robert B. Morse, Eng. State Board of Health, Baltimore; E. B. Whitman, Sanitary Engineer, Baltimore; Massachusetts, F. A. Barbour, Sanitary Engineer, Boston; Michigan, W. C. Hoad, Sanitary Eng., University of Michigan, Ann Arbor; Edward D. Rich, State Sanitary Engineer, Lansing; Minnesota, H. A. Whitaker, Sanitary Engineer, State Board of Health, Minneapolis; R. R. Price, Sec'y League of Minnesota Municipalities, Minneapolis; Nebraska, R. C. Ozman, Sec'y League of Nebraska Municipalities, Lincoln; New Jersey, Clyde Potts, Sanitary Engineer, Morristown; F. T. Parker, Sec'y Atlantic City Sewerage Co., Atlantic City; New York, W. P. Capes, Director N. Y. Conference of Mayors, Albany; Theodore Horton, Sanitary Engineer, State Board of Health, Albany; North Carolina, J. L. Ludlow,

Con. Engineer, Winston-Salem; Warren H. Booker, Engineer State Board of Health, Raleigh; North Dakota, C. J. McGurran, Sec'y State Board of Health, Devils Lake; Ohio, W. H. Dittoe, Engineer State Board of Health, Columbus; E. G. Bradbury, Con. Eng., Columbus; Oregon, David N. Roberg, State Health Officer, Portland; South Dakota, E. K. Mather, Sanitary Engineer, Mitchell; Texas, V. M. Ehlers, State Sanitary Engineer, Austin; Virginia, Richard Messer, Sanitary Engineer, State Board of Health, Richmond; West Virginia, Mayo Tolman, Director State Board of Health, Charleston; G. M. Osborn, Sanitary Engineer, Charleston.

As soon as funds sufficient to justify the action were secured, the secretary, by direction of the president, secured a proposition from Mr. Wallace R. Lane of Chicago, the attorney who successfully defended the city of Knoxville, Iowa, a number of years ago, against a claim by the Cameron Company, to act as attorney for the League. It was first decided to call a meeting of the executive committee in Chicago to consider this proposition but later it was decided to submit the proposition of Mr. Lane to the different members of the executive committee by mail. As soon as all the members of the executive committee approve this proposition, or disapprove it, some definite action will be taken so far as an attorney is concerned. The chances are that Mr. Lane will be employed.

There has been some question on the part of the different municipalities as to whether the payment of dues, as fixed by the constitution, would be sufficient to finance the League. There are nearly seven hundred sewerage disposal plants in the country, that would be subject to royalty, on condition the claims of the Cameron Septic Tank Company are upheld. Not more than fifty of these have settled with the Cameron Company, so that at least six hundred municipalities in the country are interested in the

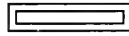
threatened suits of the Cameron Company and should join the association. If half of this number, or three hundred, join, it will give the League funds amounting to four or five thousand dollars, and as there are no salaries attached to the offices of the League, all this money can be used for legal services, postage and stationery. The entire bill for postage and stationery will not exceed five hundred dollars, so that the League will have several thousand dollars that it can spend for legal services, if the different municipalities will all pay the one assessment asked for at this time.

Any municipality may feel perfectly safe in joining the organization, because there would be no obligation to pay other fees, if it should be necessary to ask for the same. It would be entirely optional with a municipality to pay, or not pay, as they thought best at the time the call was made. The President of the League has instructed the Secretary to incur no liability of any kind, unless the money is on hand to pay for the same so that the members may feel at all times that no obligation will be incurred unless the money is in the treasury with which to pay the claim.

This is an age of co-operation and the municipalities and others interested in combating the claims of the Cameron Company should co-operate in defending any suit brought by that company. No one municipality, especially a small one, could afford to bear the expenses of defending a test case, but if all those interested will become members of the League any case brought against any of the members would be defended by the best legal talent, with the aid of the sewerage purification experts in the country.

Municipalities should bear in mind, that irrespective of where the test case is brought that they are interested in the outcome, because if the claims of the Cameron Company are once established by the Supreme Court of the United States, such decision would fix the law, and every city and town having a sewerage disposal plant would be liable for royalty. No municipality having a disposal plant can afford to remain outside the League.

Wholesale Grocers' View of Pure Foods and the Protecting Laws



The Pure Food and Drug Law, both Federal and State (identical in terms), stands pre-eminent as a beneficial measure, protecting as it does, the people of the Nation from adulterated, impure and misrepresented foods and drugs.

It is a model law too, with a basic enactment automatically expanding to include decisions and regulations which its administrators add from time to time, as investigation and experience dictate the need.

The Federal Department of Agriculture and the State Board of Health are each to be congratulated upon the wise, careful and considerate method with which they handle their important and intricate authority in all matters.

The Wholesale Grocers of the Nation were enthusiastic upon the passage of this law which they advocated and aided in every way within their power. The California Wholesale Grocers, in seconding the efforts of the State Board of Health, assisted in the enactment by the State Legislature, of a uniform law with the Federal, which works in perfect harmony with the National authority.

The people are to be congratulated upon the interest shown by the State Board of Health in the administration of this law which so carefully guards the wholesomeness of their foods, and the Grocery trade, for the always careful consideration by the Board, of the facts, which prevents over-technical, drastic or onerous regulations being imposed.

The Wholesale Grocers of the State of California convey to both the people and the Grocery trade, their deep gratification at the result of this wise law which abets their own care in the selection of pure foods, to their responsibility for which, they are always deeply conscious.

PROGRAM

Department of Public Health LEAGUE OF CALIFORNIA MUNICIPALITIES

DR. A. E. BANKS, *Health Officer of San Diego, presiding*

OCTOBER 9, 1916, 9 A. M.

1. Registration at Secretary's Desk, Municipal Auditorium.

OCTOBER 9, 1 P. M.

2. Roll Call of Health Officers, each as called upon to speak of work of more than ordinary interest done in his department during the past year. Limited to five minutes.

OCTOBER 10, 9 A. M. to 12 M.

3. Symposium on Milk—"What the State Dairy Bureau expects to do to enforce the new Milk Law, effective October 1, 1916." F. W. Andreasen, Secretary, California State Dairy Bureau.
4. "Some of the Changes Effectuated as the Result of Inspection of San Francisco Dairies." Wm. C. Hassler, Health Officer for the City and County of San Francisco.
5. "How San Francisco is Preparing to Meet the New Milk Law." Dr. Adelaide Brown of San Francisco, and the State Board of Health.
6. General Discussion. Opened by Dr. J. Temple of Santa Rosa.

OCTOBER 10, 1 to 3 P. M.

7. The Communicability of Anterior Poliomyelitis." Dr. Stanley Black of Pasadena.
8. "The Problem of the Diphtheria Carrier." Dr. R. L. Taylor, Long Beach, Cal. Discussion opened by Dr. Addison W. Preston, Health Officer, Tulare County, California.
9. "Methods for the Reduction of Secondary Infection in Smallpox Vaccination." J. N. Force, M. D., Gr. P. H., Assistant Professor of Epidemiology, University of California.

OCTOBER 11, 9 to 12 A. M., 1 to 3 P. M.

10. "Suggestions as to the Problem of the Abatement of Nuisances." Dr. L. M. Powers, City Health Commissioner, Los Angeles, Cal. Discussion opened by J. H. Gray, Health Department of San Jose, Cal.
11. "Co-operation Between Health Officers and Social Workers." Dr. Ruth Purcell of San Gabriel.

OCTOBER 11, 3 to 5 P. M.

Joint Meeting with League.

12. "Sewage Treatment Works in California." C. G. Gillespie, Director of the Bureau of Sanitary Engineering of the State Board of Health.
13. "Four Years' Experience with the Imhoff Tank." Olin E. Steward, City Engineer of Anaheim.

OCTOBER 11, 8 P. M.

14. "New Ideas Regarding Sewage Disposal." City Engineer Orbison of Pasadena, and T. D. Allin, Commissioner of the Board of Public Works of that city; illustrated with stereopticon views.

The discussion following will be led by Prof. Charles Gilman Hyde, of the Department of Sanitary Engineering of the University of California.

OCTOBER 12, 9 to 12 A. M.

15. "Practical Problems in the Management of the County Health Office." Dr. J. L. Pomeroy, County Health Officer, Los Angeles County. Discussion led by Dr. Wm. C. Hassler, Health Officer, San Francisco.
16. "The Problem of Rural Quarantine." Dr. J. H. Shaw, County Health Officer, Sonoma County.

OCTOBER 12, 1 to 3 P. M.

17. "Local Health Districts." B. D. Marx Greene, LL. D., Berkeley, Cal.
18. "The Plan for State and Local Health Districts." Dr. W. A. Sawyer, Secretary California State Board of Health.

OCTOBER 13, 9 to 12 A. M.

19. "The Formation of Mosquito Abatement Districts." Dr. C. A. Morris, Health Officer, Kern County.
20. "Malaria in Tulare County." Dr. Addison W. Preston, Health Officer, Tulare County.
21. "Report of the Mosquito Survey for the State Board of Health." Prof. W. B. Hens of the University of California.

OCTOBER 13, 1 to 3 P. M.

22. Report of Committee on Legislation—B. D. Marx Greene, Chairman.
23. Report of Committee on Standard Forms—J. H. Gray, Chairman.

OCTOBER 14, 9 A. M.

24. Unfinished Business and Election of Officers.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Bonds, issuance of for municipal bridge. Elsinore, 1360.

Automobiles for hire, regulating of. Grass Valley, 1361.

Grades, establishing of. Chino, 1362.

Foundries, prohibiting operation of within certain portions of the city. Sacramento, 1363.

Street Work, ordering the performance of, and adopting specifications therefor. San Francisco, 1364.

Spur tracks, granting permission to lay down, construct and maintain. San Francisco, 1365.

Intoxicating liquors, regulating the selling, giving or furnishing to others in the county of Santa Barbara. 1366.

Travel and traffic, regulating on streets and other public places. Sacramento, 1367.

Senior bookkeeper in the office of the auditor and ex-officio assessor, creating position of, fixing the compensation and providing for the method of his appointment. Oakland, 1368.

Taxes, levying and fixing rate of for fiscal year. National City, 1369.

Funds, creating of. Santa Monica, 1370.

Taxes, levying and fixing rate of for fiscal year. Anaheim, 1369.

Motor vehicles for hire, prohibiting owner or driver from soliciting patronage or advertising by public outcry or oral solicitation on any street or alley. Anaheim, 1371.

Streets, changing the names of. Chino, 1372.

Curb grades, changing and establishing. Richmond, 1373.

Bonds, issuance of. Tracy, 1360.

Officers and employees, enumerating and fixing rate of compensation. Santa Maria, 1379.

Taxes, levying and fixing rate of for fiscal year. Santa Barbara, 1369.

City Hall, regulating use of. Salinas, 1374.

Taxes, levying and fixing rate of for fiscal year. Bakersfield, 1369.

Taxes, levying and fixing rate of for fiscal year. Sacramento, 1369.

Sidewalks and roadways, regulating the digging up, also refilling and repair. San Leandro, 1374.

Meetings of the Board of Trustees, fixing time and place. Walnut Creek, 1375.

Petroleum, gasoline, benzine, naphtha, any products of petroleum or hydrocarbon liquids, regulating the keeping, storing and use of. Burlingame, 1376.

Farm market, establishing of. Coeur d'Alene, 1377.

Nuisances, the prevention and suppression of. (Amending.) Oakland, 1377.

Crown grade or elevation line, changing and re-establishing. San Leandro, 1373.

Gasoline or other oils from automobiles, prohibiting leaking upon streets. Sacramento, 1378.

Imprisonment in county jail for the violation of an ordinance. Hercules, 1359.

PROGRAM
 Seventh Annual Convention
 OF THE
 League of Washington Municipalities
 AND THE
 State Conference on City Planning
 TO BE HELD IN
 Everett, Wash., October 12-14, 1916

THURSDAY, OCTOBER 12TH

9 A. M. to 12 M.

1. Call to Order by the President.
2. Welcome to Everett—Mayor D. D. Merrill.
3. Response—President Leonard O. Meigs, North Yakima.
4. Report of Secretary-Treasurer—Dr. Herman A. Brauer, University of Washington.
5. Appointment of Committees on Credentials and Auditing.
6. Introduction of Resolutions.

*Reports and Announcements from Sections**

7. Mayors, Commissioners and Councilmen—C. M. Fassett, Commissioner of Public Utilities, Spokane.
8. City Attorneys—George R. Bigelow, City Attorney, Olympia.
9. City Engineers—D. W. McMorris, Assistant City Engineer, Seattle.
10. Treasurers, Comptrollers and Clerks—A. B. Lund, Asst. Treasurer, Seattle.

*Reports and Announcements from Committees**

11. Public Utilities—E. D. O'Brien, Assistant Superintendent Public Utilities, Seattle.
12. Public Health—Dr. J. S. McBride, Commissioner of Health, Seattle.
13. Elections Committee—Dan F. North, City Attorney, Bellingham.
14. Third and Fourth Class Cities—H. W. Hale, City Attorney, Ellensburg.
15. Civil Service—Mayor Joseph F. Barton, North Yakima.

THURSDAY AFTERNOON

2 P. M. to 5 P. M.

16. Section Conferences and Committee Meetings, as announced at previous session.

*Preliminary three-minute statements by the respective chairmen, announcing programs for section conferences and committee meetings.

THURSDAY EVENING

8 P. M.

CITY PLANNING CONFERENCE

Col. Howard A. Hanson, Presiding

17. Personal Observations on City Planning Abroad, a joint discussion illustrated by numerous lantern slides:
- (a) R. H. Thomson, Consulting Engineer, Seattle.
 - (b) Samuel Hill, of Mary Hill, Wash.
 - (c) Discussion from the Floor.

FRIDAY, OCTOBER 13TH

9 A. M. to 12 M.

18. Section Conferences and Committee Meetings.

FRIDAY AFTERNOON

2 to 3 P. M.

19. Civil Service Classification and Grading—Paul B. Phillips, Central Bldg., Seattle.
20. Everyday Problems and Practical Procedure in Preparation of Local Assessment Rolls—E. K. Le Blond, Assistant City Engineer. Seattle.

FRIDAY AFTERNOON

3 to 5 P. M.

City Planning Conference—(Continued)

21. Port-Terminal Factor of Municipal Planning—Paul P. Whitham, Consulting Civil Engineer, Seattle.
22. The Architectural Side of City Planning—W. R. S. Willeox, Consulting Architect, Seattle.
23. Real Estate Development and City Planning—A. L. White, President Park Board, Spokane.

FRIDAY EVENING

8 P. M.

City Planning Conference—(Continued)

24. Fundamental Considerations in the Making of Plats—A. H. Dimock, City Engineer, Seattle.
25. Intra-urban Transportation and Width of Paved Roadways—James E. Gould, Consulting Landscape Architect, Seattle.
26. Legality of Zone Ordinances—Walter F. Meier, Assistant Corporation Counsel, Seattle.
27. City Planning Legislation—Judge T. L. Stiles, Tacoma.

SATURDAY, OCTOBER 14TH

9 A. M. to 12 M.

28. Reports of Committees.
29. Election of Officers.
30. Adoption of Resolutions.

Sylmar Brand

Olive Oil

Ripe Olives

The reason why Sylmar products remain the same from year to year is because the olives themselves are produced on the famous Sylmar ranch, which is devoted to the growing of olives exclusively. For this reason, the process of growing and the picking of the ripe olives to be processed into marketable products either as ripe olives or oil, is directly under the supervision of one concern and there is no opportunity for any variation in the final out-put, which would exist with a firm having to buy the raw product from orchards located at varying distances from the factory. Both the olive oil and ripe olives are put up in tin and glass containers. The merchant thus is able to buy his supply of these articles from one concern and the ultimate consumer can exercise his preference as to the container.

Twelve years ago, Sylmar olive oil was awarded the Grand Prize over all competitors, both foreign and domestic at the St. Louis Exposition, and in 1915, the same award was given to this oil at the San Francisco Exposition. This evidence of its uniformity, over a long period of years is surely convincing.

Los Angeles Olive Growers Association



Los Angeles, California



Mention "Pacific Municipalities" when writing for catalogs.

S U E T E N E

THE VERY BEST FRYING AND SHORTENING
MEDIUM OBTAINABLE

Uniformly pure and wholesome. It makes
short, crisp and delicious pastry

REX PORK AND BEANS

Rex Brand Pork and Beans appeals to the palate and
satisfies the Department of the Interior

THEY ARE DELICIOUS—
DIGESTIBLE AND APPETIZING

OUR SELECT BRAND OF—

DIAMOND "C" HAMS

and

DIAMOND "C" BACON

are in a class by themselves. They are extremely delicious
in flavor—made from choice corn-fed hogs, and are produced
under the strict supervision of United States Inspectors.

The Cudahy Packing Company
Los Angeles

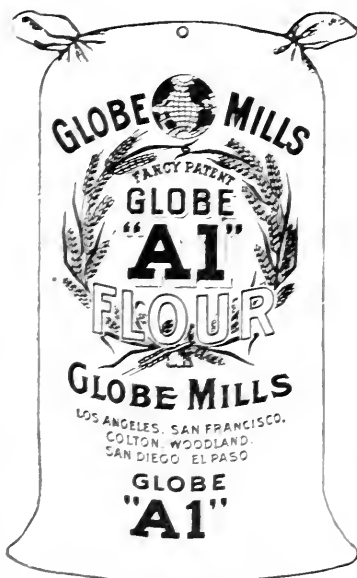
Western Meat Company

SAN FRANCISCO

PACKERS AND EXPORTERS

ALL PRODUCTS MADE UNDER
RIGID INSPECTION
UNITED STATES GOVERNMENT

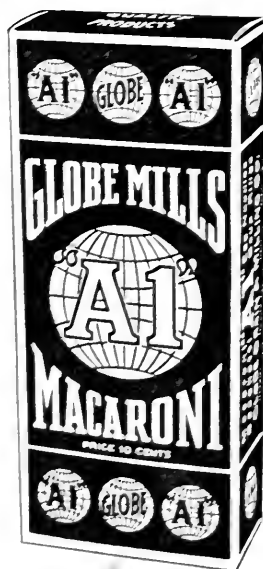
Globe Flour



ITS
MERIT
IS WELL
KNOWN

A
NEW
MEMBER OF
THE

Globe A 1
Family



Mention "Pacific Municipalities" when writing for catalogs.

MICROSCOPES FOR CITY ENGINEERS, CHEMISTS & HEALTH DEPARTMENTS

Poor concrete in building or poor pavement in streets is costly to both contractor and taxpayer. Concrete, no less than steel, is dependent for mass perfection upon the perfection of its smallest part, and in no way so far known can the quality of these small components be so well, so quickly, and so accurately determined as by the use of the microscope. Send for our booklet on

OPTICAL INSTRUMENTS FOR INSPECTION AND TESTING OF MATERIALS

ALSO

ENGINEERING TRANSITS AND LEVELS

Of Highest Grade, with system of interior focusing and other distinctive features.

BAUSCH & LOMB OPTICAL CO.
OF CALIFORNIA

154 Sutter Street

San Francisco, Cal.

California Brand Egg Noodles

California Brand Egg Noodles are manufactured under the most sanitary conditions and by the latest and most improved machinery.

They are far superior to the so-called Egg Noodles on the market, in fact, they are just like the Egg Noodles made at home.

Why make noodles at home, when you can buy California Brand Egg Noodles at a very small cost with the saving of time and labor.

OAKLAND NOODLE FACTORY

527 SEVENTH ST., OAKLAND, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

PURITY

is carried to the furthest extreme in the making of **BESGRADE FLOUR**—and the purity is *preserved* by our patent, paper-lined dust-proof sack, which effectually prevents all contamination and keeps the flour fresh and wholesome.

GREAT WESTERN MILLS
LOS ANGELES, - - - CALIF.



Why Sperry Flour Makes Good Bread



1. Sperry Flour is milled from a blend of hard and soft wheats drawn from different states wherever we find desirable wheats.
2. By blending these wheats we obtain a flour of unexcelled baking qualities—a real bread flour—also adaptable for the highest types of pastry.
3. We maintain experimental laboratories and bakeries at our mills. Expert chemists and bakers keep a close watch on the quality of our flour. The chemists prescribe the blend of wheats to be used. A trial baking of the blend is first made; then daily bakings of the actual flour milled each day.
4. Therefore, we are assured that our flour will make good bread before it is sold to you as the baking qualities have been proven. You will find that Sperry Flour makes larger and whiter loaves than any other flour.

Mention "Pacific Municipalities" when writing for catalogs.



REG. U. S. PAT. OFF.

BAKER'S CHOCOLATE and COCOA

Standards for
Fine Quality Delicious Flavor
Absolute Purity

WALTER BAKER & CO., Ltd.

Established 1780

DORCHESTER, MASS.



CROWN FLOUR



A strictly PURE FOOD PRODUCT
and practically the only unbleached
flour being sold in this State. It
makes more and healthier bread.

SEE OUR DEMONSTRATION
HENRY F. ALLEN, Agent
SAN FRANCISCO, CAL.



WESSON OIL

For all salad dressings, including French
dressing, Mayonnaise and the various
fancy dressings founded on these; also for
shortening bread, cake and pastry.

WESSON OIL costs about half as much as good
butter or imported oil and has equally fine flavor and
nutritious value. In small, medium and large cans—
AT YOUR GROCER'S.

Mention "Pacific Municipalities" when writing for catalogs.

E. H. ROLLINS & SONS

FOUNDED 1876

HAVING AN EXPERIENCE OF TWENTY-TWO YEARS IN THE PURCHASE OF CALIFORNIA
MUNICIPAL SECURITIES, OFFER THEIR SERVICES TO PACIFIC MUNICIPALITIES
CONTEMPLATING THE ISSUANCE OF BONDS

CORRESPONDENCE IS INVITED

307 FIRST NATIONAL BANK BUILDING
SAN FRANCISCO

204 SECURITY BUILDING
LOS ANGELES

BOSTON

NEW YORK

DENVER

CHICAGO

SNIDER'S

ALWAYS RIGHT

CONTAINS NO ARTIFICIAL PRESERVATIVE

Snider's Catsup
Snider's Chili Sauce
Snider's Oyster Cocktail Sauce
Snider's Salad Dressing
Snider's Tomato Soup
Snider's Pork and Beans

MADE IN AMERICA

ABSOLUTELY PURE

The Austin-Western Road Machinery Co.

Are the Largest Manufacturers in the World of Road
Machinery, Municipal Machinery and Contractors Equip-
ment of All Kinds, Consisting of Road Rollers, Rock
Crushers, Road Graders, Sprinklers, Sweepers, Dump
Wagons, Scarifiers, Lawn Mowers, etc.

Offices at

20-22 Fremont St., San Francisco and 120 S. Los Angeles St., Los Angeles

Mention "Pacific Municipalities" when writing for catalogs.

Official Electricians for Municipal Convention

Visalia Electric Works

ROBT. TSCHUMY, Proprietor

Everything in the Electrical Line

Agents for Westinghouse Motors

A Specialty in Store and Window Lighting

CARNATION MILK

ANSWERS THE

PURE MILK QUESTION



BUY IT BY THE CASE

For Convenience and Economy

C. NECKLAUSSON

C. E. SWEENEY

Wunder & Stag Billiard Hall

A Full Line of

CIGARS, PIPES AND TOBACCOS

AND SOFT DRINKS

East Main Street

Visalia, California

Mention "Pacific Municipalities" when writing for catalogs.



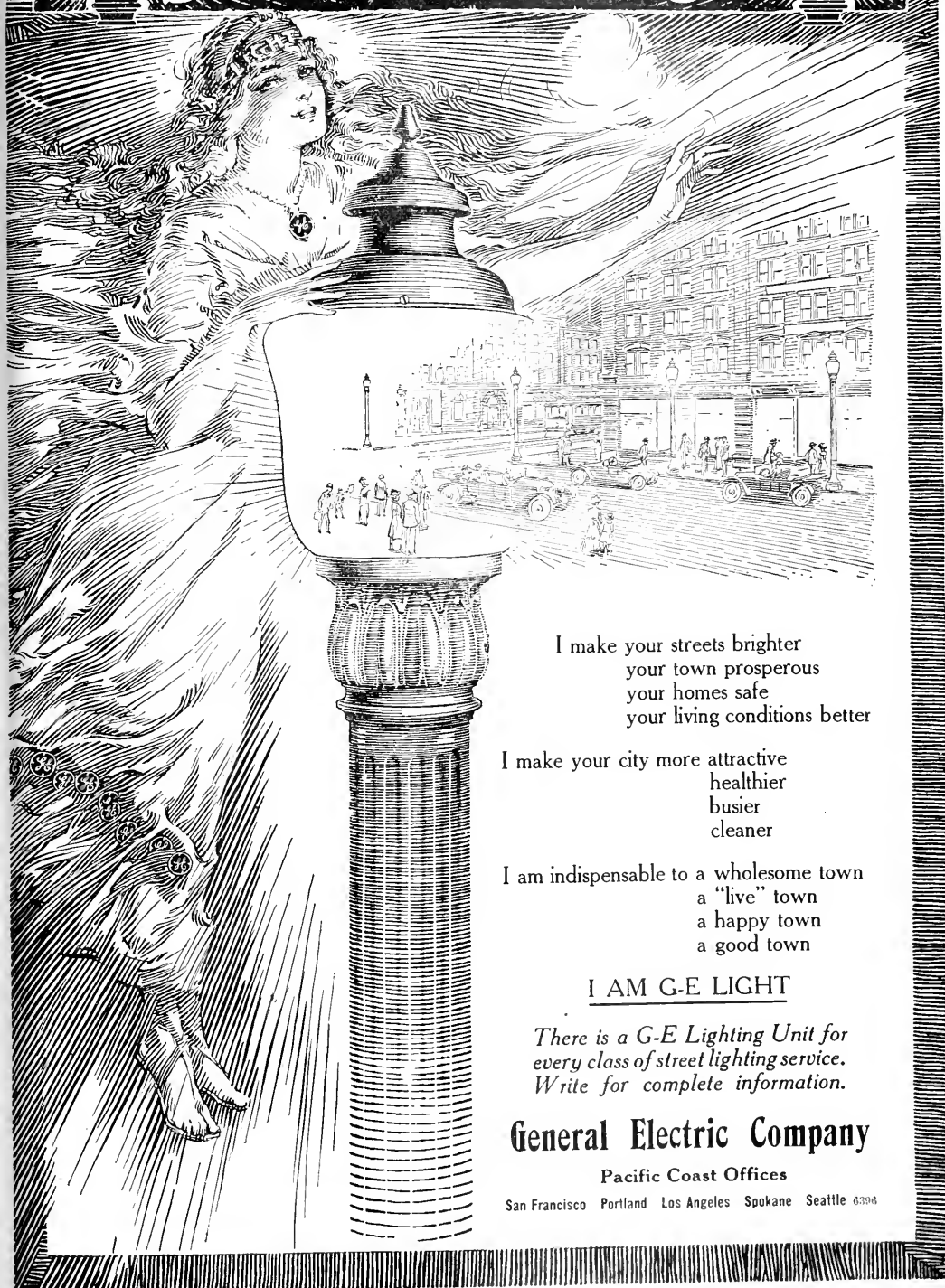
WILSON'S
MAJESTIC
HAMS AND BACON
"Deliciously Different"



Mention "Pacific Municipalities" when writing for catalogs.



Street-ology



I make your streets brighter
your town prosperous
your homes safe
your living conditions better

I make your city more attractive
healthier
busier
cleaner

I am indispensable to a wholesome town
a "live" town
a happy town
a good town

I AM G-E LIGHT

*There is a G-E Lighting Unit for
every class of street lighting service.
Write for complete information.*

General Electric Company

Pacific Coast Offices

San Francisco Portland Los Angeles Spokane Seattle 6394

RELIABLE FIRMS

The firms mentioned below specialize in municipal work or furnishing supplies for the same. They bear a good reputation for reliability and fair dealing. In case of proposed work or needing supplies you are urged to write them. Catalogs sent on request.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Asphalt Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, California Bldg., Los Angeles.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Cast Iron Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Cement Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Concrete Mixers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

California Corrugated Culvert Co., Los Angeles and West Berkeley.

American Corrugated Culvert Co., 706 Hobart Bldg., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, 68 Sacramento St., S. F.

Flushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.
Pacific Flush Tank Company, Chicago and New York.

Gas Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Hollow Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Co., Chicago and New York.

Inspection and Tests

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric

Bldg., Portland; Colman Bldg., Seattle;
Pauslen Bldg., Spokane.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251 Bush St., S. F.

Ornamental Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric

Bldg., Portland; Colman Bldg., Seattle;
Pauslen Bldg., Spokane.

Pavements

Warren Brothers Co., California Bldg., Los Angeles.

City Street Improvement Co., Whittell Bldg., S. F.

Pavement Materials

Warren Brothers Co., California Bldg., Los Angeles.

Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Pressed Brick

N. Clark & Sons, 112-116 Natoma St., S. F.

Gladding, McBean & Co., Crocker Bldg., S. F.

Road Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Scarifiers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Septic Tanks

Pacific Flush Tank Company, Chicago and New York.

Sewer Fittings

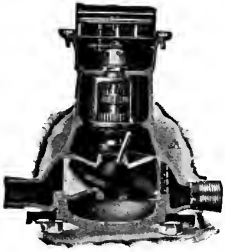
Pacific Flush Tank Company, Chicago and New York.

Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.

Gladding, McBean & Co., Crocker Bldg., S. F.

PACIFIC MUNICIPALITIES



TRIDENT DISC

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters
Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

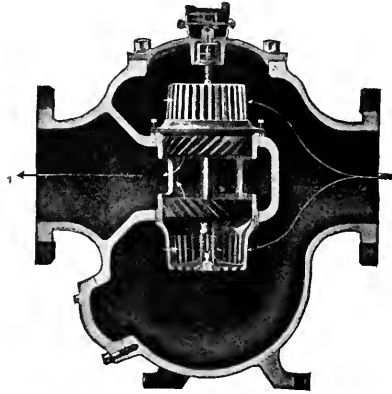
Manufactured by

NEPTUNE METER CO.

NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Road Oilers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Rock Crushers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Roofing Tile

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

Sprinkling Wagons

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric
Bldg., Portland; Colman Bldg., Seattle;
Pauslen Bldg., Spokane.

Street Sweepers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Testing Materials

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Water Meters

Neptune Meter Company, San Francisco
and Los Angeles.

National Meter Co., 141 New Montgomery
St., S. F.

Water Pipe

United States Cast Iron Pipe & Foundry
Co., Monadnock Bldg., S. F.

Weed Killers

Atlas Preservative Company of America,
Rialto Bldg., S. F.

Street Signs

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Vitrified Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

NEW YORK by Rail and Ocean

Fares Same as All Rail, But Includes Berth and Meals Five Days on Steamer

TAKE **"Sunset Limited"** (No Extra Fare)
FROM SAN FRANCISCO 4:20 P. M.
(Ferry Station)

Via SUNSET ROUTE to NEW ORLEANS

And There Connect With

Southern Pacific's Splendid *Ocean Liners*

Sailing Wednesdays and Saturdays to

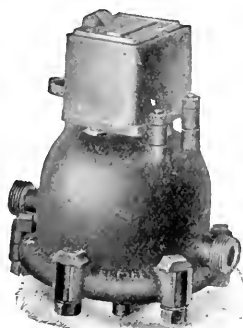
NEW YORK

For Fares and Berths
Ask Agent

SOUTHERN PACIFIC

WATER METERS

FOR ALL KINDS OF SERVICE



EMPIRE METER

CROWN EMPIRE
NASH GEM
EMPIRE COMPOUND
PREMIER METERS

TYPE K NASH METER

The
SIMPLEST
DISC METER



NASH METER

National Meter Co.

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY**GENERAL CONTRACTORS**

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK**The Best Paving Material in the World**

Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY**ECONOMY****QUALITY****CAST
IRON****PIPE**

3 inch to 84
inch, for
Standard and
High Pressure

**WATER
GAS**

**Fire Protection
Sewers**

**Irrigation
Culverts**

**POWER
PLANTS**

**Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings**

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York

London

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Vancouver, B. C.

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.

Mention "Pacific Municipalities" when writing for catalogs.

Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF
CALIFORNIA MUNICIPALITIES

LEAGUE OF

PACIFIC NORTHWEST MUNICIPALITIES
OREGON—WASHINGTON—IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION
OF THE STATE OF CALIFORNIA



NEW CITY HALL, SAN FRANCISCO

LEADING ARTICLES IN THIS ISSUE

Proceedings of the Nineteenth Annual Convention, Visalia.....	423
The City Manager Plan in San Jose.....	452
Advantages of Preferential Voting	473
Election by Preferential Voting	474
Titles of New Ordinances Received.....	476
What Our Pacific Coast Cities Are Doing.....	477

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

City Clerks

must make their report to the State Controller, and our SEGREGATION LEDGER assists you to form a report that is most acceptable to the Controller and a great time saver in preparing.

Write us regarding the Ledger and allow us to solve your Report Troubles.

Assessments

Now is the time to place your order for the CITY ASSESSMENT ROLL AND LISTS.

We are forming our annual "combination" run—and by allowing us to supply you—insures you "the Roll on time" and at the correct price.

Street Improvements

Our new forms are prepared to meet the latest changes in all STREET IMPROVEMENT ACTS.

We can furnish forms for the Act that your Charter provides, and our line of Street Improvement Bonds is legally correct.

Have you a copy of W. J. Locke's publication of Improvement Act of 1911 with Amendments, also Act of 1915?

Send for a copy as it contains valuable information.

Price - \$2.00

A. CARLISLE & CO.

Specialists in Municipal Supplies

251-259 Bush Street

San Francisco, Cal.

Mention "Pacific Municipalities" when writing for catalogs.



“Americanisms”

My town is my outdoor home.

Its prosperity adds to my welfare.

Success is just as sure in my town as elsewhere,
perhaps surer.

It has all the advantages of a clean, busy, prosperous,
well-lighted town.

It is a beautiful town by night as well as day.

We are all safer out of doors, or in the dead of night,
because of Good Street Lighting.

I'm proud of my town—it is giving me a good liveli-
hood—it has made us all happier—it has spread good
will from the highest to the lowest in the community
—it is a GOOD town

Because the streets are G-E Lighted
General Electric Company

Pacific Coast Sales Offices in San Francisco, Los Angeles, Portland,
Seattle and Spokane; Rocky Mountain Sales Offices in Denver,
Colorado, Salt Lake City, Utah

6394

LEAGUE OF CALIFORNIA MUNICIPALITIES

ORGANIZED 1897

— OFFICERS —

President	- - - -	(City Attorney of Napa)	-	WALLACE RUTHERFORD
First Vice-President	- -	(Pres. Board of Public Works of Los Angeles)	- -	LORIN A. HANDLEY
Second Vice-President	- -	(Commissioner of Public Works, Berkeley)	- -	F. T. ROBSON
Secretary	-	H. A. MASON	Executive Secretary	- WM. J. LOCKE

Secretary's Office and Headquarters of the League, - Pacific Building, San Francisco

INFORMATION BUREAU

The League of California Municipalities maintains in connection with the Secretary's Office, a Bureau for furnishing city and town officials with information on municipal affairs, and loaning copies of new ordinances and specifications. Officials are urged to make a free use of this Bureau. Kindly send a self-addressed stamped envelope in all cases.

MEMBERSHIP

Alameda, Albany, Alhambra, Alturas, Amador City, Anaheim, Angels, Antioch, Arcadia, Arcata, Arroyo Grande, Auburn, Azusa, Bakersfield, Belvedere, Benicia, Berkeley, Biggs, Bishop, Boulder Creek, Burlingame, Calexico, Calistoga, Chico, Chino, Chula Vista, Clovis, Coalinga, Colfax, Colton, Colusa, Compton, Concord, Corcoran, Corning, Coronado, Corona, Covina, Crescent City, Daly City, Dinuba, Dixon, Dorris, Dunsmuir, Eagle Rock, El Monte, Elsinore, Emeryville, Escondido, Etna, Eureka, Exeter, Fairfield, Ferndale, Fort Bragg, Fort Jones, Fortuna, Fowler, Fresno, Fullerton, Gilroy, Glendale, Glendora, Hanford, Hayward, Healdsburg, Hemet, Hercules, Hermosa Beach, Hillsborough, Hollister, Holtville, Honolulu, Huntington Beach, Huntington Park, Imperial, Inglewood, Jackson, Kennett, King City, Kingsburg, Lakeport, Larkspur, Lemoore, Lindsay, Livermore, Lodi, Lompoc, Long Beach, Lordsburg, Los Angeles, Los Banos, Los Gatos, Loyalton, Manhattan Beach, Maricopa, Martinez, Marysville, Merced, Mill Valley, Modesto, Monrovia, Montague, Monterey, Mountain View, Napa, National City, Nevada City, Newman, Newport Beach, Oakland, Oceanside, Ontario, Orange, Orland, Oroville, Oxnard, Pacific Grove, Palo Alto, Pasadena, Paso Robles, Petaluma, Piedmont, Pinole, Pittsburg, Placerville, Pleasanton, Point Arena, Pomona, Porterville, Red Bluff, Redding, Redlands, Redondo Beach, Redwood City, Reedley, Rialto, Richmond, Rio Vista, Riverside, Roseville, Ross, Sacramento, San Anselmo, San Bernardino, San Bruno, San Diego, San Fernando, San Francisco, San Gabriel, San Juan, San Jose, San Leandro, San Luis Obispo, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Clara, Santa Cruz, Santa Maria, Santa Monica, Santa Paula, Santa Rosa, Sausalito, Sebastopol, Selma, Sierra Madre, Sisson, Sonoma, Sonora, South Pasadena, South San Francisco, St. Helena, Stanton, Stockton, Suisun, Susanville, Sutter Creek, Sunnyvale, Taft, Tehachapi, Tracy, Tropico, Tulare, Turlock, Upland, Vacaville, Vallejo, Ventura, Venice, Visalia, Watsonville, Watts, Whittier, Willits, Winters, Woodland, Yreka.

Pacific Municipalities

OFFICIAL ORGAN OF THE LEAGUE OF CALIFORNIA MUNICIPALITIES
THE LEAGUE OF PACIFIC NORTHWEST MUNICIPALITIES, THE MUNICIPAL
LEAGUE OF MONTANA AND THE BOARD OF SUPERVISORS
ASSOCIATION OF THE STATE OF CALIFORNIA

Entered as second-class matter March 22, 1913, at the Post Office at San Francisco, California,
under the Act of March 3, 1879.

VOL. XXX

EIGHTEENTH YEAR

No. 11

EDITORS - - - H. A. MASON AND WM. J. LOCKE

CONTRIBUTING EDITORS

CHARLES GILMAN HYDE, Professor of Sanitary Engineering, UNIVERSITY OF CALIFORNIA

JOHN H. RUSSELL, Ph. D., Secretary League of Pacific Northwest Municipalities, WALLA WALLA, WASHINGTON

N. E. ENTRIKIN, Secretary-Treasurer Montana Municipal League, LIVINGSTON, MONTANA

EDITORIAL AND BUSINESS OFFICE, NINTH FLOOR, PACIFIC BLD'G, SAN FRANCISCO

ADVERTISING RATES ON APPLICATION

Address all Communications to "PACIFIC MUNICIPALITIES" Pacific Building
San Francisco, California

NOVEMBER 1916

NOTICE—Every city belonging to the League of California Municipalities is entitled to a copy of this magazine for each of its officials without extra charge. If not received kindly notify the Secretary.

PROCEEDINGS

— OF THE —

Nineteenth Annual Convention

— OF THE —

League of California Municipalities

— HELD AT —

Visalia, Cal., October 10th—15th, 1916

The Nineteenth Annual Convention of the League of California Municipalities was opened in the new Municipal Auditorium of the City of Visalia, Tuesday morning, October 10, 1916. The officials in attendance representing the various cities and towns of the State, together with their ladies and friends, were registered as follows:

Alameda.

M. Herspring, Assistant Food, Dairy Inspector.

T. Carpenter, City Veterinarian.

A. Hieronymus, Health Officer.

Wm. J. Locke, Executive Secretary, League of California Municipalities.

Albany.

Geo. W. Nickerson, City Clerk.

John Glanovich, City Marshal.

Alhambra.

Dr. F. E. Corey, Health Officer.

Charles E. Hewes, City Manager.

Amador County.

Dr. G. L. Lynch, Health Officer.

Arroyo Grande.

Dr. H. A. Gallup, Health Officer.

Bakersfield.

Walter Osborn, City Attorney.

Wallace M. Morgan.

Robt. B. Ray, City Engineer.

Berkeley.

Professor M. E. Jaffa, State Nutrition Expert.

J. W. Force, Health Officer.
 Chas. H. Cheney, Secretary, City Planning Commission.
 E. J. Lea.
 J. J. Benton, M. D., Health Officer.
 Duncan W. Duffee, Civic Art Commission.
 M. L. Hanscom, Auditor.
 C. Hoff, Councilman.
 Frank D. Stringham, City Attorney.
 W. H. Gounley, State Food Inspector.
 F. W. Andreason, Secretary, State Dairy Bureau.
 F. T. Robson, Commissioner Public Works.

Burlingame.

Eric Wold, City Engineer.

Chico.

M. C. Polk, City Engineer.

Clovis.

L. E. Weldan, City Clerk.
 S. D. Horning, Trustee.
 L. W. Gibson, President, Board of Trade.
 W. C. Pendergrass, M. D., Trustee.

Colton.

W. B. Culross.

Corcoran.

R. S. Arnold, City Clerk.
 K. Van Zante, City Attorney.
 J. F. Peery, Health Officer.

Daly City.

F. B. Woodhouse, City Trustee.
 Chas. L. Biebel, City Trustee.

Dinuba.

J. W. Woodhouse, Trustee.
 G. W. Osterhout, Trustee.

Emeryville.

R. S. Hawley, City Engineer.

Exeter.

George E. Waddell, Chairman, Board of Trustees.
 C. L. Burnett, Trustee.

Fort Bragg.

C. H. McConaughy, City Attorney.

Fresno.

Ira D. Whitaker, State Dairy Inspector.
 J. C. Ferger, Trustee.
 Mrs. W. J. McNulty, City Planning Commission.
 Alva E. Snow, Mayor.
 Geo. M. Boles, Trustee.
 Dr. A. H. Sweeney, Health.
 Robert H. Ellithrop, Plumbing Inspector.
 B. E. Cronkite, City Engineer.
 G. L. Lang, Health Officer.
 Charles E. Butner, City Planning Commission.
 E. F. Lecour.
 George S. Waterman, Trustee.
 Lewis H. Smith, City Attorney.

Gilroy.

Dr. J. Clark, Health Officer.

Glendale.

T. W. Watson, City Manager.
 Edward M. Lynch, City Engineer.

Hanford.

A. J. Young, Trustee.
 F. Richardson, Trustee.
 N. E. Wright, Trustee.
 T. R. Hight, Trustee.
 F. E. Kilpatrick, City Attorney.

Hayward.

J. D. Armstrong, City Clerk.
 Lester Perry, Trustee.
 Dr. F. W. Browning, Health Officer.
 Mrs. M. W. Browning.

King City.

Hugh Osburn, City Attorney.
 C. P. Henry.

Kingsburg.

Andrew Erickson, Trustee.
 J. F. Bromack, Trustee.

Lemoore.

J. W. Dockstader, Trustee.
 Edward Evanger, City Recorder.
 F. Blakeley, Trustee.
 L. L. Fallett, City Clerk.
 E. G. Sellers, Councilman.

Lindsay.

E. V. Bogart, City Clerk.
 Allen McGregor, President, Board of Trustees.

Lodi.

L. F. Barzellotti, City Engineer.

Long Beach.

H. C. Waughop, City Clerk.

Lordsburg.

W. C. Doughty, Trustee.

Livermore.

D. A. Smith, City Clerk.

Los Angeles.

Annie Cordon Whitnate.
 John Topham, City Council.
 Fred C. Wheeler, City Council.
 John E. Kienle, Health Officer.
 Mark C. Cohn, State Immigration and Housing Commission.
 J. G. Rosso, State Department.
 C. O. Boynton, City Auditor.
 George H. Roth, Assistant Health Commissioner.
 Lorin A. Handley, President, Board of Public Works.
 C. Gordan Whitnall, City Planning Secretary.

James G. Stafford, Appraisal Expert.
 W. T. Knowlton, Engineer of Sewers.
 R. H. Monahan, City Electrician.

Los Banos.

A. E. Cowell, City Engineer.

Merced.

T. W. Fowler, City Trustee.
 Lewis Hegner.
 Dr. J. C. Smith, Health Officer.
 John Czerny, Street Superintendent.
 R. Barcroft, Trustee.

Mill Valley.

H. C. Symonds, City Attorney.

Modesto.

G. H. Freitas, City Engineer.

Monterey.

Carmel Martin, City Attorney.

Napa.

David C. Scribner, City Clerk.
 Alex. Hull, Health Officer.
 Wallace Rutherford, City Attorney.
 J. C. Gardner, City Engineer.

Oakland.

Dr. Kirby Smith, Health Officer.
 A. S. Lavenson, Planning Commissioner.
 Fred. V. Daire.
 Walter N. Frickstad, Assistant Street Superintendent.
 Frank C. Merritt, Chief Dept. City Clerk.
 Wm. H. O'Brien, Dept. City Attorney.
 Perry F. Brown, City Engineer.

Orange.

Fleetwood Bell, City Clerk.
 W. R. Garrett, City Attorney.
 O. A. Gunther, Trustee.
 Henry Terry, Trustee.

Ontario.

Archie D. Mitchell, City Attorney.

Palo Alto.

Louis Olsen, Assistant Health Officer.
 J. F. Byxbee, City Engineer.
 C. B. Cooley, Mayor.
 C. F. Cooley, Commissioner.
 W. F. Hanrahan.
 Frank Kasson, City Clerk.
 Mrs. Harold F. Gray, Health Officer.

Pasadena.

J. W. Prinz, Auditor and Assessor.
 James Howard, Dept. City Attorney.
 George A. Damon, City Planning.
 R. V. Orbison, City Engineer.
 A. L. Hamilton, Commissioner of Finance.
 T. D. Allin, Commissioner of Public Works.
 John Beyer, Superintendent of Streets.

Piedmont.

Dr. Benjamin T. Mouser, Health Officer.

Porterville.

Fred W. Pease, City Engineer.
 Edward F. Halbert, City Clerk.

Redlands.

Geo. S. Hinckley, City Engineer.
 D. N. Findley, Trustee.
 A. E. Brock.

Redwood City.

H. C. Tuchsens, Trustee.
 Albert Mansfield, City Attorney.

Richmond.

D. J. Hall, City Attorney.
 J. E. Marshall, Tax Collector.
 Dr. C. R. Blake, Health Officer.
 R. L. Fernald, Councilman.
 A. C. Faris, City Clerk.
 W. L. Lane, Councilman.
 H. D. Chapman, City Engineer.

Rio Vista.

Geo. A. Work, Town Attorney.

Riverside.

Dr. J. G. Baird, Health Officer.
 A. H. Winder, City Attorney.

F. J. Calkins, Assistant City Engineer.
 W. V. Darling, Street Superintendent.
 S. C. Evans, Park Commissioner.

Sacramento.

H. S. French.
 Gus. S. Turner.
 W. A. Sawyer, Secretary, State Board of Health.
 J. S. Canhan, State Milk Inspector.
 M. J. Desmond, City Clerk.
 E. J. Carraghar, City Commissioner.
 J. H. Quire, State Library.
 John S. Chambers, State Controller.
 Clyde L. Seavey, Chairman, State Tax Commission.

San Anselmo.

H. E. C. Feusier, City Engineer.
 R. Atthowe, President, Board of Trustees.

San Bernardino.

Wm. Guthrie, City Attorney.

San Bruno.

H. A. Bewley, City Clerk.

San Diego.

Allen H. Wright, President, League of California Municipalities.
 Dr. O. G. Wickerski, Health Officer.

San Fernando.

S. G. Chamberlain, City Engineer.

San Francisco.

W. H. Kellogg, Director of Laboratories.
 Ernest J. Mott, Official Reporter of League.
 E. P. Jones, Assistant City Engineer.
 F. J. Erb, Director of Exhibits.
 G. W. Pendergrass.
 John D. Hynes, Supervisor.
 John B. Walsh, Supervisor.
 W. B. Faville, City Planning.

San Jose.

G. M. Fontaine.
 Prof. Thomas H. Reed, City Manager.
 Russell B. Trippe, City Clerk.
 Earl Lamb, City Attorney.
 Dr. Wm. Simpson, Health Officer.
 Roy E. Walter, Auditor.
 Milton Maggini, City Engineer.

San Leandro.

Dr. L. Michael, Health Officer.
 Harris P. Jones, City Attorney.
 Chas. Q. Rideout, City Commissioner.
 M. Geisenhoffer, Street Commissioner.
 F. B. Granger, Trustee.

San Mateo.

Elma F. Early, City Clerk.
 Richard Campbell, Street Commissioner.
 W. C. McLand, Health Officer.
 Charles N. Kirkbride, City Attorney.

San Rafael.

Rafael G. Duff, Health Officer.

Santa Ana.

Dr. J. I. Clark, Health Officer.

Santa Barbara.

Archie B. Cook, City Engineer.

Santa Cruz.

H. E. Piper, Health Officer.

Santa Monica.

Chas. G. Shipman, Health Officer.
 John J. Seymour, Planning Commissioner.
 John A. Morton, City Engineer.
 V. R. Lucas, City Attorney.

Santa Rosa.

George E. Richards.
 C. W. Cozad, Street Commissioner.
 H. B. Snyder, City Clerk.
 Mrs. H. B. Snyder.
 W. T. Spooncer, Councilman.
 J. Temple, Health Officer.

Sebastopol.

H. B. Scudder, Superintendent of Water.

Selma.

A. L. Campbell, Street Superintendent.
 W. H. Shafer, City Engineer.

Sonoma.

J. H. Shaw, Health Officer.

Sonora.

M. L. Scott, Mayor.

South San Francisco.

F. A. Cunningham, Trustee.
 Dr. J. C. McGovern, Health Officer.
 J. W. Coleberd, City Attorney.

Stockton.

Daniel V. Marceau, City Attorney.
 E. A. Arthur, Health Officer.

Sunnyvale.

J. T. Brent, President, Board of Trustees.
 F. P. McCray, Town Engineer.
 Ida Trubschenck, Town Clerk.
 Mrs. Norman Scofield, Health Officer.

Sutter County.

T. P. Peery, Health Officer.

Taft.

H. A. Hopkins, Trustee.

Tehachapi.

Ferd Snyder, Jr., Town Clerk.

Tulare.

H. C. Heitzig.
 G. F. Leckner, City Clerk.
 G. W. Jones, Trustee.
 A. P. Bosworth, City Engineer.
 U. G. Cottle, Trustee.
 A. W. Wheeler, Trustee.

Tuolumne County.

Wm. L. Hood, M. D., County Health Officer.

Turlock.

Wm. N. Graybiel, City Attorney.

Ventura.

Edwin Isensee.

Visalia.

J. H. Askin, Mayor.
 A. D. Sweet, Trustee.
 A. K. Orr, Past President of the League.
 Dr. A. W. Preston, Health Officer.
 Arden Henry, Street Superintendent.
 Lawrence Maye, City Engineer.
 Dr. M. F. Grove, Health Officer.
 W. R. Bailey, Health Officer.
 W. C. McAdams, Trustee.
 B. U. Heberling, Trustee.

Watsonville.

W. A. Trafton, Mayor.
 C. B. Lewis, Councilman.

Winters.

R. L. Niemann, Chairman, Board of Trustees.
 L. H. Gregory, Superintendent of Water Department.

The convention was called to order by President Allen H. Wright, City Clerk of San Diego, who spoke as follows:

The President: It has been reputed throughout the State for some time that Visalia is dry. It would seem that this morning there has been a change of that condition, perhaps for our benefit. Somebody said I brought the rain up from San Diego, but I deny the allegation. However, we will open our program this morning and proceed so far as we can during the first session. Some of our speakers are not yet here, and I have delayed opening awaiting the arrival of the morning trains. However, I desire to announce at this time that during the coming sessions, I shall expect to start promptly at the time specified, in the hope that we may be able to get through with the very large amount of business that we have before us at this convention.

Once more the League of California Municipalities has assembled in annual convention, and I trust that every delegate here will be able to return to his home at the end of the week with the full satisfaction of time well spent and with many new ideas that may be used to the benefit of his community.

That is the primary reason for the existence of a municipal league, and it has been with that end in view that your several cities and towns have sent you here as their authorized representatives.

For your edification this year an effort has been put forth to assemble a corps of speakers who are experts in their several lines, and, since they have consented to address you and have carefully prepared their papers on important topics, I bespeak, on their behalf, a tribute of close attention from every delegate. I feel sure that you can learn much that will prove of advantage to you.

If you do, from these papers and the subject-matter so carefully assembled and presented, secure even one suggestion which can be applied to the benefit of your community your trip here will not have been in vain. But, I am sure, it will not be only one valuable idea which will come to you but scores of ideas which you can adapt to your own use and your own betterment.

We who constitute the League of California Municipalities can well feel a pardonable pride in the fact that our organization is looked upon as one of the foremost of its kind in the country. Writing in "The American City" in June, 1914, Clinton Rogers Woodruff, Secretary of the National Municipal League, said that a special committee of that league had gathered the reports of all the leagues of municipalities, conferences of mayors and similar organizations, and various other information regarding their activities, and it was the opinion of that committee that the best and most efficient league was the California League of Municipalities, and that it constituted the highest development of such organizations yet seen in the United States.

"The committee believed," wrote Mr. Woodruff, "that the strength of the California League must be due, in considerable measure, to the fact that it brings to its conferences not merely the mayors, but the leading technical officials of the city, such as city engineers, attorneys, clerks, auditors, and the like."

Our success as a league composed of city officials has led to the organization of various groups of county officials, and thus we have the affiliations of county assessors, supervisors, sheriffs, county clerks, recorders and others. We have organizations of fire chiefs, police department heads, and the like, and all are doing good work along the same general lines that have been followed by the League of California Municipalities since it was organized.

This is our nineteenth annual meeting, and while many of you have been coming to the conventions quite regularly it may not be amiss to state for the benefit of those who are with us

this week for the first time that the purpose of the League is to bring together, once a year, the officers of the cities and towns of the State so that they may make practical studies of problems which confront all municipalities. We desire, also, to bring about a closer feeling of fellowship and co-operation. Still another motive, and one of great importance, is the engendering in every city official in California an ambition to give his community the very best service possible.

To reach the highest degree of service as one of the State's numerous organizations this League should include in its membership every city and town within the borders of the commonwealth, and we should make every endeavor to get in any which may not now be enrolled.

It is now conceded that the science of municipal government is one of the most important before the American people today. At one time it was thought sufficient to have a few officials at the head of a city, with little attention being given as to the details which have since come to be viewed in their true light. Now there is a tendency to have trained men at the head of city affairs, and this is just as requisite as it is to have trained men at the head of private corporations. Our towns and cities are corporations capitalized at millions, based on the assessed valuations, and every citizen is a stock-holder and should feel an interest in his city's government. The expenditure of large sums of the public funds should be in the hands of men who appreciate the responsibility of their positions. One great purpose of our League is to make the delegates who attend its sessions better officials, by helping them to come to a better understanding of the conditions which confront them and to be better able to attack the momentous problems which come to every community.

It is to be hoped that the time will come when the incumbent of a position of trust and responsibility in any municipality, who has shown his devotion to duty and his efficiency as a public servant, shall not be disturbed every

time there may be a change in the political complexion of the community. It is not, on the other hand, to be urged that any man who has shown himself inefficient or disloyal to the public interest shall be retained. The theory of civil service, when it can be absolutely divorced from favoritism or political influence, is ideal. If a man proves to be large in his capacity to fill a public position, give him a larger place to fill. If the League helps to make a delegate better enabled to serve his community, then the League has done a distinct service for the city which he is now representing on the floor of this convention.

While the State Library's Bureau of Municipal Research is doing an excellent work in gathering data concerning the great problems of city government, I am in favor of making our own central clearing-house, maintained at the offices of the League in San Francisco, of even greater importance. At present our secretaries gather a large amount of material in the way of ordinances and reports from the cities of the State, but I believe by co-operation this department of our activities can be made of still greater service. Each town and city in the League, on adopting a new ordinance of general nature, such as regulating traffic, fixing licenses, establishing health regulations, setting out specifications for street work, and so on, can afford to have a sufficient number of additional copies printed so that a regular quota can be sent direct to the League's office, and then any other city, in preparing measures of like nature, can secure direct from our secretaries a copy of each ordinance bearing directly on the subject in hand. In time it may become necessary for the League to employ a filing clerk to gather and index these things and look after the prompt mailing of copies to cities writing for them. Our cities, in paying their annual dues, would become eligible to draw upon this clearing-house for material at any time.

I would recommend the enactment by the cities of this State of uniform traffic laws, so that the visitor who

comes to California by automobile (and, parenthetically, I may say that our tourist crop is a most important asset) may know when he passes from one town to another that he is still traveling under the same traffic regulations. I firmly believe such uniform ordinances will prove most acceptable to our cities as well as the general public. This could well be taken up this coming year by our committee of attorneys.

Let us, in getting down to business at this, our nineteenth annual gathering, determine to give everyone here just as much good as we can and take for ourselves just as much as is offered to us individually. Let harmony prevail. Let any community jealousies be forgotten, and let us work with the broader aim of making in our glorious State a group of municipalities which shall be models to the whole world.

The President: As President of the League, I take pleasure at this time in introducing to the delegates Mayor J. H. Askin, of Visalia. (Applause.)

ADDRESS OF WELCOME.

Mayor J. H. Askin of Visalia. Mr. President, Ladies and Gentlemen: On behalf of the City of Visalia, it gives me very great pleasure to extend to the visiting delegates and their families the hand of welcome. Visalia is very proud to have gathered here city officials from all parts of California. A convention of this kind is of great value to any city in the State. It only needs a glance at the program that has been laid out for the League and its departments here, a program of wide range of problems vitally affecting the interests of every municipality, to show the splendid work that is being accomplished by the League. It will be my pleasure to be a most attentive listener to the various discussions that will take place during the next four days.

The City of Visalia wants you to feel at home during your stay. I am sure that the tears with which she greeted you this morning will dry away, and that you will enjoy yourselves under our typical Tulare skies. The delegates are cordially invited to get into touch with our city officials and inspect the work-

ings of our various departments, including the fire department, sewer department, street department, and various other departments of the city government, in the development of which, we feel that, in some respects, we have the right to feel justly proud. We also invite you to inspect the plans of our new hotel. (Laughter.) That hotel is now to be a reality, for the site is being cleared and work will be pushed rapidly, so that the next time you come to visit us, it will afford comfortable housing for you all.

I am not going to make a speech. At the reception which is to be tendered you this evening, when this auditorium is to be formally dedicated, the key of the city will be handed over to you, and you will be welcomed in true Visalia style by those of our citizens who are more accustomed to public speaking than I. But I extend to you the greetings of the people of our city, and sincerely trust that your convention will be one of great profit and pleasure to all the municipalities of our glorious State. (Applause.)

The President: On behalf of the League, in the absence of Past President Snow, of Fresno, who was to make a response to this address of welcome from Mayor Askin of Visalia, I have asked City Attorney Rutherford, of Napa, the First Vice-President of the League to respond on behalf of the League. Mr. Rutherford. (Applause.)

Wallace Rutherford, City Attorney of Napa and First Vice-President of the League. Mr. President, Mayor Askin of Visalia, and Members of the Convention: I know I voice the sentiment of every delegate in this convention when I extend the thanks of the convention to Mayor Askin, and to the good people of Visalia, for the hand of fellowship that has been extended to us. During the last four or five conventions of this League (and it has been my privilege to attend many of them), I have had the pleasure each time of hearing former Mayor Orr of your city exhort the convention to come to this fair city, and last year, when placing Visalia in nomination, I

told him that if we received one-half as good a welcome and had anything like as good a time as he promised us, we should be well pleased. In passing, I may say to you that, but for the oratoric voice and splendid work of this son of Tulare, it might have been many years yet before the convention would have come to Visalia.

But we are glad we are here. Mayor Orr promised us a new hotel. We accept Mayor Askin's invitation to inspect the plans. We know it is not the fault of the officials of the city that the new hotel is not an accomplished fact. Nevertheless, we assure the good people of Visalia that we are comfortably housed.

Very few cities in California have such an excellent meeting place for a convention as this fine auditorium. It will be our great pleasure to take part in its formal dedication tonight. And if we find the various departments of city government here on a par with this evidence of civic activity, we shall have learned from Visalia, as well perhaps as imparting something to you.

We had expected Visalia to be entirely dry. The reception given us at the station this morning tends to disillusion us. Yet we must admit that at this very moment, Visalia is not the only spot in California that is somewhat wet.

It is very evident to me from the splendid attendance of city officials, and from the program that has been laid out for our consideration, that we are going to have a very profitable convention. And I hope that, before the convention closes, the League of California Municipalities will show the people of Visalia, that the people of California, particularly the city officials, are actively interested and intensely in earnest in the work of the League.

Again, Mayor Askin, let me thank you and the citizens of Visalia, on behalf of the League, for the hospitality tendered us, and assure you that when we go to our homes, after our labors are over, we shall each and all know that Visalia is on the map, and that she is able to teach us many things in the way of municipal government.

I thank you. (Applause.)

The President: The next order of business will be the report of the Secretary-Treasurer, Mr. H. A. Mason, who will also read some communications.

SECRETARY'S REPORT

FOR YEAR 1915-16.

To the Representatives of the Members of the League of California Municipalities.

Ladies and Gentlemen: In presenting this eighteenth annual communication reviewing the work of the League for the past year, it is perhaps needless to go into a detailed account of matters of minor consequence.

There was no session of the Legislature during the year and consequently no time had to be given to legislative matters.

So the Executive Secretary, Mr. Locke, found time to compile a Handbook for officials of the fifth and sixth class cities which comprises the laws incorporating these municipalities and affecting their administration. These laws are accompanied by citations to decisions of the courts interpreting the various provisions. Many pages are given to the publication of forms used by municipalities, standard specifications for certain classes of public work and—it is to be hoped, useful information. This volume has just been issued and this office is in receipt of many acknowledgments of appreciation.

We hope that it will prove useful to a large number of officials and demonstrate the value of this organization to its members, especially those of the classes stated.

We would like to do something of a similar character for the larger cities—those who are acting under freeholders' charters and we only need a suggestion as to what may be done in order that this office may get busy.

We wish to announce our readiness to gather useful statistics on any municipal subject, to suggest needed charter amendments, or to obtain information as to what the other cities of the country are doing along any particular line.

In the line of municipal progress we have to report that during the past year

several cities have adopted the so-called "City Manager Plan" of municipal administration, and we have arranged for such managers to be present at this convention and relate their experiences. In this connection I wish to repeat a thought that I have expressed before, viz: that there might be a plan evolved by which the smaller towns could have the benefit of the city manager scheme through co-operation: that is by the joint employment of an expert manager who could join general supervision to a number of small towns, and by each paying a portion of his salary, obtain, with little cost the benefit of his expertness. We would like to see at this convention a beginning made for such a scheme of co-operation.

Very little attempt has been made this year to enlarge the membership of the League, and the increase of members has been small—only about half a dozen. During the coming year it is proposed to conduct a campaign that will bring in those towns which have not as yet affiliated. We think that this can be done with the aid of the Handbook just spoken of. The membership of the League now stands at 202, leaving about 40 towns as non-members.

This office is constantly in receipt of numerous requests for information, advice, copies of ordinances, etc., and the number of such inquiries is increasing all the time. It requires considerable time and research to answer some of the requests and in performing this service we trust that the existence of this League is fully justified. We hope that the service in this line may be still more extended.

We welcome any suggestions that may add to the service that the League may perform and in all seriousness we ask you all to present some plan that will further the objects of this organization. It might be possible to establish, with the aid of the State University a course in municipal administration by correspondence, or otherwise as may be desirable, and thus enable city officials to become more adept in the performance of their duties. It might be possible to establish a sort of lecture bureau and deliver a course of lectures in the differ-

ent towns of the State, and through them to develop a higher and more appreciative citizenship. These are suggestions worthy of your consideration.

Appended herewith is a financial statement covering the past thirteen months:

FINANCIAL STATEMENT.

Sept. 1, 1915. Bal. Cash on hand	\$1,827.34
Receipts for dues.....	4,169.65
Total.....	\$5,996.99
Disbursements	\$4,306.53
Bal. Cash on hand Oct. 1, 1916	1,690.46
Total.....	\$5,996.99

The approximate annual income of the League is \$4,200 and the ordinary expenses amount to about \$3,500. During the year extraordinary expenses were incurred of approximately \$300.00 by the purchase of a set of California Supreme and Appellate Court Reports and a new typewriter.

Respectfully submitted,
H. A. MASON,
Secretary.

WM. J. LOCKE,
Executive Secretary.

Several communications were next read soliciting the 1917 convention of the League.

The President: The communications and telegrams relative to the place of holding the next Convention will be taken under advisement, and on Friday afternoon the League will select the meeting place for 1917. As to the communication from the Utilities Bureau, I will at this time refer that to the Section of Engineers, Councilmen, and Street Superintendents, and ask that they report back some time during the week, with their recommendation as to joining the Utilities Bureau.

The financial report of the Secretary, will, following the usual procedure, be referred to the Department of Clerks, Auditors and Assessors, who will appoint a Committee to audit the same and make a report back to the Association before the Convention shall close.

It has been the custom of the League

for some years to have a roll-call of cities, upon which you have been asked to report your greatest achievement of the year immediately past. This year we thought we would take it up in a little different way, and we are going to call the roll of cities of the League, and ask those who have had any unusual experience or been confronted with any particularly difficult problem during the year, to mention that, and any question that you would like to have referred or discussed during this meeting bearing on your particular problems, will you so state when the roll call is made and the subject is reached, and we will endeavor to see that some answer is given to your problem, if possible, during the Convention. At this time, therefore, we take up the roll call of cities, and any city which has had any particular or unusual experience or any particularly difficult problem during the year, we will be glad to have respond and tell us something about it. And I would ask that, when you rise, when the name of the city is called, that you give your name so that the official reporter may get it for the record. All of these discussions are taken down, and it is quite requisite that we know who is speaking and what city he is representing at the time. The Secretary will now call the roll.

On a roll call, the following responses were made and discussion had.

Berkeley: Christian Hoff, Commissioner of Public Health and Safety. Commissioner of Public Works Robson will probably be here, and he would be able to give you a little more extended exposition of our problems than I can. I think the problem in which we are most largely interested at this moment, and which has given us most concern, is that of garbage collection and disposal. As most of you know, we have an incinerator, but we have had private parties collecting our garbage, and it is not altogether satisfactory, so we are at the present time thinking of embarking upon municipal collection of garbage. I understand that the City of Pasadena is doing that work. Mr. Hanscom, our city auditor, is particularly anxious to get data on the auditing part of that

work, so that I hope we may, either now or at a later time, hear from Pasadena.

The President: It may be well, for Pasadena, if she is represented here, to briefly answer the question raised by the delegate from Berkeley.

Assistant City Attorney Howard, of Pasadena: I represent Pasadena, but I was unable to hear the question, Mr. Chairman.

The President: It was relative to how you had met the problem of garbage collection as a municipal feature rather than by private parties.

Mr. Howard: The garbage is collected by employes of the city, and a small fee is charged of the person whose garbage is so collected. There is also a system of licensed garbage collection, but that garbage is disposed of by other methods, most of it, than being taken to the municipal incinerator. I think, from the program, that you will hear further on this subject from Pasadena before the Convention is over.

Burlingame: Eric Wold, City Engineer. I think Burlingame has had the distinction of letting during the past year the largest paving contract on record under the Improvement Act of 1911. They also took advantage of the 1915 Bond Act to our satisfaction. The job was estimated to cost \$320,000, and was let for \$247,000, a 4-inch concrete base pavement, with an inch and a half asphalt wearing surface, put in at 8.67 cents.

Chico: M. B. Polk, City Engineer. Our greatest problem during the year was how to get an Imhoff sewage disposal tank to do the work it should do. Another problem we now have is how to keep free of paying royalty to the Cameron Septic Tank Company.

Emeryville: R. S. Hawley, City Engineer. A problem that affects us, Mr. Chairman, is one that I think affects all municipalities of the sixth class, and possibly some of the fifth class that have paid or partially paid fire departments, and that is the so-called proposed two platoon system that was before the last Legislature of the State of California. I don't know just what consideration has been given that question by the people,

but I believe it would be in order to have discussion of that matter, and to consider the advantages and disadvantages of that system. It seems to me from a consideration I have given to it that the disadvantages are a great many more than the advantages, especially for smaller cities with paid or partially paid fire departments. I would like to have that taken up and discussed at some time, if it can be done.

The President: We will try to find the time on our program to have that taken up. It is a very important topic. At our recent gathering of the fire chiefs of the Pacific Coast in San Diego, there was much discussion of it. I was unable to attend the session, and did not hear the argument, but during the week we will try to have that question taken up for discussion.

Exeter: E. L. Burnett. Perhaps I have misapprehended the matter. Is it special problems that are desired to be stated?

The President: Yes.

Mr. Burnett: I think Mr. Waddell, our Mayor, will be here this afternoon. I know of no special problem that I can suggest to you at this time.

Fort Bragg: C. H. McConaughy, City Attorney. Mr. Chairman, we have no particular questions that we desire to

OUR NEW FRONT COVER.

In the new front cover design used in this issue for the first time it is necessary to use a photo-engraving of some public building or improvement, and it is the intention to run a different picture each month.

Officials of any city or town which has a public building, park, bridge or other improvement of unusual attractions, are therefore urged to send us a halftone engraving of the same for reproduction on the front cover. It should not be more than $4\frac{3}{4}$ inches wide by $3\frac{1}{2}$ inches high, and flush at the bottom. In case you should not have an engraving, send a good photograph together with \$2.50 to cover costs. We will have the engraving made and will return it to you immediately after using.

seek special information upon, but I want to say that I am here to get all the general information I can. I assume that later in the Convention the different cities will be perhaps called upon to make a report as to their improvements, and so on, that have gone on during the last year. Am I correct in that?

The President: We will see how the calendar is filled up. If we have time, we may take that up, but we thought that perhaps greater advantage could be gained this year by a statement of particular problems and their discussion.

Mr. McConaughy: There are several things that have occurred during the past year that I would like to relate for Fort Bragg. In the first place, **I want to state to the delegates my appreciation of the Handbook just issued and distributed by the League. This is my first term as City Attorney, and, of course, any number of questions were presented with which I was not familiar, and the Handbook was very materially of assistance in many respects—notably in making up the budget this year.** This is the first convention at which Fort Bragg has ever been represented, and it is, I believe, one of the cities farthest north present at this time. It is a city of about 3500 inhabitants, situated on the coast of Mendocino County. We have a nice little city there, whose principal business is lumber. We propose to pave about six blocks of our main business street with redwood blocks. We hope to get fair results. It is right in the redwood district, and next year we can probably tell you how it works out. We acquired a water works at a price set by the Railroad Commission, some forty odd thousand dollars. Since then we have built a reservoir holding 3,000,000 gallons of water, a dirt reservoir, rolled and packed. We have found this year that our water rates are sufficient to redeem the two bonds, to pay the interest and maintenance and show a net profit of \$2,000. The tax levy is \$1.45, and last year it was \$1.60. The total revenue raised by taxes is a little over \$10,000. Notwithstanding the fact that the city is appropriating \$10,000 to pay for a certain portion of the street work, we reduced our taxes 15 cents on the hundred.

It shows that municipal ownership is the coming thing, because in the end the people acquire the water plant which will be worth from \$70,000 to \$100,000, aside from the fact of the revenue, which they would have to pay a private corporation. So that in the end will reduce the taxes. (Applause.)

The President: I think the last speaker should have a word of commendation for the long trip which he has made. He has come something like 500 miles by auto. We are glad to have Fort Bragg represented on the floor this year.

Fresno: Mayor A. E. Snow. Fresno has no special municipal problems, except that its officials had a problem to solve this morning. They started in plenty of time to be here by nine o'clock, making the run by auto, and the other side of Goshen the machine refused to work, and if it hadn't been for a Ford, I think we would not have been here now. Otherwise, we are very well.

The President: We are very glad to have Past-President Snow with us. We shall hope to hear something more from him during the week.

Glendale: City Engineer H. B. Lynch. Glendale has had no particular problem for the year except the regular run of routine business of a growing community.

Hayward: Lester Perry, trustee. We are working on a municipal water supply. That is our problem, upon which we hope to have some light before we go back.

Kings City: G. P. Hendry, trustee. I would say that we have made a start on the construction of a sewer system, that is, we are working on the plans and specifications at the present time, and that is as far as we have gone. We have the proposition of the tank under headway now, and hope to get some information upon that while we are here.

Lodi: L. F. Barzelotti, City Engineer. We had one problem during the year. The City at the last election voted for the acquisition of a municipal paving plant, but when the matter had passed, we were not sure whether we could use the plant, if we had it. Information upon that subject would be gladly received.

Long Beach: C. O. Boynton, Auditor. Our city is working under a Commission form of government, and has been for a year past. Our principal problems last year were in the direction of the completion of our outfall sewer system for the entire city, which we are now completing by districts, but the most important of all things with us I think is our new system of accounting for the city, upon a revenue and expense basis. In one sense our greatest problem has been the jitney problem. We are now wrestling with that.

Los Angeles: F. C. Wheeler, Councilman. One of the important things that we have had to meet in Los Angeles is to determine to put in a sewage disposal pipe and pier, with the necessary adjuncts, under a bond issue for \$1,800,000, and then have the people turn the bonds down. However, we are going to do it, anyway. We happen to have one of those things in our City Government in the City Treasury, known as a reserve fund. Some people look with holy horror on such a thing as a reserve fund, but we have one of about \$1,400,000, and it is a very handy thing to start on the sewage disposal pipe with.

The big thing that we have accomplished, or have almost finished, is the municipal electric plant. The building itself is now completed, the water nearly ready to turn the wheels, we have 5000 or 6000 poles erected in the city, the rights of way are nearly all secured. **It was quite amusing to notice at assessment time, when we were sitting as a Board of Equalization, that land that was not worth a thing, that you could not raise a row on it for purposes of taxation, when we wanted to have right of way over the property, suddenly became worth \$10,000 an acre.** In a short time we had the Committee appointed and went out to deal with the three large companies, and we will offer them what is right and fair and just, if they don't see fit to accept our offer, we will proceed with the completion of the distributing system. We can generate electrical power for one-quarter of a cent a kilowatt hour—at the power plant. We can sell it downtown for three-quarters of a cent at a profit—as a wholesale rate,

of course. The municipal rates will be somewhat higher, naturally. I look to our electrical system to do one thing for the City of Los Angeles, and that is to cheapen the cost of electric power. We are about to introduce an ordinance covering the subject of city planning. We have reduced our assessment for tax purposes from \$1.60 to \$1.45 this year. Besides all the other problems of a growing city, we have to report that when we don't like the Mayor, we get another one.

Merced: Mayor T. W. Fowler. I think the problem that we will have to solve, the one of greatest importance to us, is the city planning commission's work of persuading the railroad companies to give us a union depot. We have an application now on file with the Railroad Commission. That, I think, will be our problem for the next year.

Modesto: George H. Freitas, City Engineer. The greatest problem that Modesto has is to keep up with the property owners in paving the streets.

Mountain View: H. A. Mason. Representing Mountain View in a subordinate capacity, Mr. President, there is one little matter that I might call to the attention particularly of the smaller cities in the League, and that is that we made a discovery this year. We found that, while we had a volunteer fire department, it had never been established by ordinance. The result of it was that we didn't have to pay any accident insurance on our fire department. We raised the point that, not having been established, they were not municipal employes, and the State then very kindly rebated the amount of insurance which it usually charges against the members, and which constitutes one large item of expense.

Oakland: Frank C. Merritt. Oakland is represented by four, and will be represented by five delegates, Mr. Chairman. We would like to confer with some of the Clerks or other officials who have been using the Act of, I think, April 7, 1911, providing for the improvement of exterior boundaries of municipalities. The language of the Act is somewhat ambiguous, in regard to the publication

of notices. That is the latest problem in the Clerk's office in Oakland.

The President: That matter will be discussed by Vice-President Rutherford in the City Attorneys' Section on Thursday morning at 9:30.

Ontario: Archie D. Mitchell, City Attorney. Our greatest problem is the disposition of storm waters. Our streets have a natural drainage to the south, and the north and south streets are mere water-carrying channels, in storm seasons such as we had last year. Some of those streets end just in front of certain personal, private property, and we are now fighting a suit which has been brought by a property owner against the city in the sum of \$10,000 by reason of the overflow of this water on to his property. We are not at all afraid that the amount of damage can be recovered. We are greatly interested in the question of liability, and the question also of what we can do to relieve the property and the streets and the city in general of the damage which is always done by storm water.

Orange: O. E. Gunther, City Trustee. Our experience at Orange has not been different from many similar towns. The jitney problem has given us trouble. Our city attorney will take that problem up, I have no doubt, when the proper time comes for its discussion.

Palo Alto: Frank Kasson, City Clerk. Palo Alto has taken up so many ambitious plans for improvements this year that it finds it difficult to get the money to finance them. We have, however, reduced our municipal lighting rate to one of the lowest in the State, and at the same time have been able to reduce our tax rate. The accomplishment of that has been one of our problems.

Pasadena: John Beyer, Commissioner. Our problems are those of many other growing cities. We have transportation problems and the jitney problem and storm water disposal, but perhaps our greatest problem is the sewage disposal. However, Mr. Orbison and Mr. Allin, representing the Engineer's department, will discuss that proposition at the proper time.

Mr. J. W. Prinz, City Auditor of Pasadena: One great problem we have

coming up is the Taxpayers' League. I suppose other cities have the same problem. We are about to vote on a change of form of government from the Commission to the City Manager Plan. We have other problems besides, one of them being the annexation problem. Los Angeles is reaching out its fingers, and, like the big fish we have heard about, is taking everything in. That is a very serious problem with us at the present time.

Redlands: Mayor A. E. Brock. We have found in Redlands that sixth-class city government lends itself very readily to a City Manager plan of government. We have turned over to the Engineer not only the street work and the sewer work, but the municipal water system, and now they have turned the fire system entirely under the charge of the City Engineer. We have now only the fire and police departments, conducted by the Trustees.

Richmond: D. J. Hall, City Attorney. Aside from the general problems the City of Richmond has, incident to a great deal of harbor development work, which problems we have to fight out among ourselves with the help of the good Lord, and on which the convention cannot help us, in addition to which we are now in the throes of new charter building. A great many experts on city government have said that Richmond has one of the best charters in the State, and we have admitted it, barring any argument on it. But some people believed that we could make our good charter better, and the result is that we have elected a board of fifteen freeholders, who are now deliberating upon a new charter. Those fifteen freeholders have about fifteen different ideas of what a charter ought to be, with the possible result to be feared that it will resemble somewhat Joseph's coat of many colors. We hope, in the discussion of the problem of city government by the City Managers present, we will get some light on the subject that will be of assistance. We have also a unique problem. Richmond three years ago had no city hall, living in a rented building. Now we have two city halls. I think we can boast of that. Two rival real estate companies undertook to give Richmond a city hall. One

of them was accepted under a lease contract to pay for a portion of the building and the Supreme Court ordered us to move out. The other building was erected and we undertook to move in, and the Superior Court told us not to move in. Of course, the Supreme Court will have the last say. But at the present time we are like the dove coming out of the ark—we don't know where to rest our feet. (Laughter.)

Rio Vista: George A. Work, City Attorney. I am very much interested in hearing discussed here the jitney problem, yet I can safely say that Rio Vista has no jitney problem, because as yet she has no jitneys. We expect in the very near future to install one jitney, at least. There are some of the troubles that there are others here present more qualified to speak on than I. Mr. Kirkbride of San Mateo, can probably give us some light on what is perhaps our main problem. Rio Vista I think has not been represented at the meetings before, but we are glad to be here now, and to state that problem: a case arose out of street improvements that was the cause of contributing a judicial decision in this State, a very significant decision, in connection with street work. The holding was, briefly, that resolutions under the 1911 improvement act, and it could in general be extended easily to similar resolutions and other acts, are not subject to referendum. This case went up from Rio Vista at the time of the inception of the street work there, the property owners very bitterly opposing the street improvement, as a result of which a fight began, and it eventually got into the courts. The average person may not appreciate the importance of a holding of this nature to the street contractors and to municipalities in this State. But it is of vast importance in that if it had not been so held, street improvements that now perhaps cover a period of two months, could, on the legal phase, have been held up for six or eight or ten months, or perhaps a year. That is the most significant thing that Rio Vista has to report.

San Bruno: H. A. Bewley, City Clerk. Being a new city, we naturally have a few troubles. I think they are largely

due to our own physical conditions there. We hope to learn much at this convention.

San Diego: Allen H. Wright, President of the League. I might say for the information, possibly, of the delegates, that San Diego this year had a disaster which was very serious. At the time of the January floods, we lost one unit of our water system, what was known as the Lower Otay Dam, where we had about 12 to 13 billion gallons of water stored, and we are confronted now with the reconstruction of that, and are holding an election next month for the purpose of voting \$680,000 to reconstruct it. But besides the loss of the dam and the loss of the water, we have claims from property owners owning property below the dam, whose property was washed out, the aggregate of which amounts to nearly \$700,000. So we have a problem which is possibly unique in the experience of California this year.

San Jose: H. F. Gray, District Health Officer. I am very sorry that our City Manager is not here to expound the benefits of the city managership plan in San Jose. We have just installed the new City Manager, and City Manager problems are being worked out that are of exceeding interest. They are very numerous. Mr. Reed will take up a number of these matters in his paper this afternoon, and tell you some of the new ideas we have in the City Manager form.

San Leandro: Harris P. Jones, City Attorney. We have a very sympathetic feeling for the gentleman from Pasadena, who tells us about Los Angeles stretching out its tentacles and endeavoring to engulf smaller cities. Our relationship to Oakland is somewhat analogous. Oakland, and we all honor her fair name, has surrounded us on three sides, and as she is using all the modern implements of warfare, from acetylene to the submarine, we fear that pretty soon she may cut off our escape at the rear, and isolate us absolutely. Her latest weapon is the Act of 1911 for improving the exterior boundaries of municipalities. She has initiated a proceeding for the improvement of the boulevards, which will result in a very heavy

assessment on the unfortunate citizens of San Leandro. So, in order to straighten ourselves out, we had to use the same act and assess a portion of our street work on the county property lying beyond us. The City Trustees requested me to state to you that yesterday morning we awarded a contract for the largest paving job ever undertaken in San Leandro, paving the principal street of the city for a distance of about a mile with a bitumenized concrete pavement under the Warren Brothers patent. And that is the problem which the City Trustees ask assistance upon at this time. We want all the light that can be thrown upon the matter of bitulithic pavement, both as to its surface and durability, as determined by actual experience of the cities. We shall also want some information upon the limits of our rights in connection with that patent. Our Trustees are particularly anxious to get all the information which is available from other cities who have been through the process, inasmuch as they contemplate improving other streets.

San Mateo: Charles N. Kirkbride, City Attorney. San Mateo has not had any special problem in the past year, but I appreciate the fact that she is approaching the time when she will have. With the completion of a unit of about five miles of asphalt paving this season, the town is approaching the position where every street of any importance in town has been fully improved. I imagine that when that situation arises, we will then begin to face the problem of maintenance, due to deterioration of permanently paved streets. Two other matters of minor importance have been solved satisfactorily. Heretofore it has been a matter of annual and perennial complaint that weeds grew on the sidewalks. **We have been talking about weeds in all the conventions of the League since it was organized, I think.** I want to thank the gentleman who is responsible for the Weed Improvement Act of 1915. Finally a solution has apparently been reached of that difficult problem. With two proceedings in our town, we have had so far very satisfactory experiences and it has resulted in

the handling of this difficult problem in a way that has appeared to be satisfactory, and without the cumbersome method in order to justify and endeavor to collect the cost of such an improvement from the property owner. I want to say further that the Tree Planting Act of 1913, we have always found in actual practice to work out very satisfactorily.

Santa Monica: Victor R. McLucas, City Attorney. I don't know that Santa Monica has had any unusual problems confronting it during this last year which ought to be reported before this Convention. We had a very cool summer, and I think other beach towns have had the same experience down there. That is perhaps not a municipal problem. There is one problem, however, to come before Santa Monica during the coming year, which we propose to solve, and that is the problem of how to get the meeting of this League for the year 1918.

Santa Monica has, during this year, seen the institution of the commission form of government, beginning with January 1st. We believe we have the advantages of both the commission form and the city manager form, for we have only three commissioners, a commissioner of public works, a commissioner of finance, and a commissioner of public safety, each of whom is the manager in his own department, and who together compose the city council. I do not know that the commission form of government is entitled to all the credit, but during the past year we have voted bonds in the sum of \$712,000 to acquire a municipal water plant. Those bonds were defeated before we had the commission form of government, and were carried upon an election after that form of government was adopted. We acquired all the water plants, four of them, operating in the city of Santa Monica, and began their operation on the 15th day of September, and are now collecting water rates from the people who formerly paid to the four water companies. We received a substantial premium on the sale of our bonds, amounting to \$51,500, which gave us, we thought, something quite substantial. We are now operating a water plant. The

city of Los Angeles a while ago refused to let us have some of the Owens River water supply. We offered to pay for it, but they refused to do it. We will sell them one of these plants, as they extend down like an index finger there—we will do better than they do.

Santa Rosa: Herbert B. Snyder, City Clerk. The greatest problem Santa Rosa has had during the last year has been connected with our street work. Unlike Lodi, we voted bonds. The city council took it into their hands to purchase a plant, and at the present time we have a plant of a capacity of 144 cubic yards per day; also we attempted to do street work. We did pave two blocks. The property owners petitioned for the work to be done, and agreed to pay 6 cents a square foot for it. The work was completed for 6 cents a square foot, and then the matter was presented in court and a temporary injunction was issued against the council paying for any of the work out of the city treasury. Of course, if the property owners had deposited the money in the treasury, we would be prohibited under the order of the court, from paying for that work. But the work was paid for by the committee, and that portion was settled, but the question is still in court whether the city proceeded legally with the work.

We also have a problem, how to make the city water works pay for its own maintenance. It is a moot question, and of course, very hard to solve. But we furnish 10,000 gallons free for domestic purposes, and as that comprises most of the water used by ordinary families, the 10,000 brings in no income, and the only income received is by users of the business service. If anybody can help us out, it would be something very gladly received.

Sebastopol: H. B. Scudder, Water Superintendent. We have a municipal water works installed and an ordinance providing that the property owners should put in meters and meter boxes at their own costs. That worked out very nicely until the meters commenced to wear out, and the meter boxes get out of repair. Then we had quite a good deal of difficulty. The people wanted to know

who would fix meters. Once in a while a carpenter would do a good job, and sometimes he would not, and there was a great deal of trouble. So I proposed to the council that we have a resolution by which the property owners might return the meters to the city in lieu of the city keeping them in repair. We have been doing this for some time, and about the only meters we get back are the meters that are practically worn out, or needing repair. We are still working under the old ordinance. I was wondering whether we could put through an ordinance by which we would charge, if the city installed meters, make the connections, and charge for the connections, which would practically cover the cost. I would like to find that out. It would take an ordinance.

Selma: Mr. J. L. Campbell, Street Superintendent. The only problem we have is the oiling of streets.

Stockton: D. V. Marceau, City Attorney. The trouble confronting the City of Stockton at the present time is in the form of municipal elections. We had one last Tuesday, and we have another one next Tuesday. That accounts for the absence of the other members and representatives from Stockton. Mayor Oulahan asked me to express his regret at his inability to be here this morning. He states, however, that he will endeavor to be here before the convention ends.

Stockton at the present time has plans on foot for the installation of a sewage disposal plant, involving an expenditure of about \$250,000. After considerable investigation, they adopted the Copwell System, and plans are about ready to be submitted to the State Board of Health.

At the first of this year, Stockton also had a jitney problem, and passed an ordinance regulating the jitneys. This ordinance was held up by referendum and submitted to a vote of the people on last Tuesday. The people voted against the ordinance, by a majority of about 200. However, the situation in the meantime had solved itself. The jitney is practically at this time a thing of the past, inasmuch as the street cars have done away with practically all the jitneys in the city of Stockton. The street railways claimed that they were being

run out of business, and made an offer to sell their roads to the city, and when the city council called them up and asked them how much they wanted, they withdrew their offer. So the jitney is not interfering in any way with the city of Stockton, and regulation is unnecessary at the present time.

In this connection I might also state that, at the election last Tuesday, there was submitted to the citizens of the city the two-platoon ordinance, and this was defeated by a vote of approximately 200. The principal objection urged against this ordinance was the fact that it would mean an increase in the tax rate of about 10 cents; furthermore, there would be a decreased efficiency and lack of discipline. The voters evidently thought those were sufficiently urgent reasons to defeat it. I think myself the principal reason for its defeat was the increase in tax rate that would have resulted.

The President: Since that matter of the two-platoon system has been brought up, I would like to ask at this time if there is any person on the floor of the convention who wishes to speak at some time during this week in favor of the two-platoon system, and somebody to speak in opposition to it? If there are such, and they will let me know during the day some time, I will try to put it on at some time during the week. I would like to have one speaker for and one against the two-platoon system.

Taft: Mayor H. A. Hopkins. The problem that we have had at Taft is the old perpetual motion trouble of trying to get something for nothing, without accomplishing anything. The people of Kern County, through their votes, made it possible to expend about two and a half million dollars for highway, and they are about to locate them, and that is about one of the greatest problems in Kern County today. The objectionable feature we have had is the tantalizing way that it goes as far as our city limits and no further. We have been trying to impress upon our Board of Supervisors some method whereby they can construct that highway through the city of Taft without any cost to us. But so far it has been a frost. I understand that there is an article to be presented to

this convention during the week, touching on highway development, and as I have the honor of being one of the speakers later on in the week I will also mention it to this extent, but I prefer not to go into it more deeply now.

Watsonville: Mayor W. A. Trafton. The greatest problem we have had in Watsonville during the last year has been that of which many of the other cities have spoken, **the problem of repairing bitumenized streets having a wavy surface. We have been experimenting there, and the chairman of our street committee, Mr. C. B. Lewis, is here, and I think he has almost solved that problem.** We have repaired many of our streets at small cost, and if the convention would like to hear from him at this time, or at some other time, he is present.

The President: That is one of the important topics, and I think we will have more delegates here, and I would like to have it taken up with a larger number on the floor, and we will try and have that later and discuss it later on.

Winters: Mayor R. L. Neimann. Our problem during the year was the construction of a new city hall. We have had some problems, too, of sewer disposal.

The President: That completes the list. It may be, however, that some of the cities whose names were called did not have representatives here at the time they were called, and if they have come in since then, and any city has not had a chance to be heard as to the great problem of the past year, will some delegate arise at this time and speak? We don't want any city left out of this roll call, if they have any such thing to report. I believe Mr. Locke will tell us something about Alameda.

Alameda: William J. Locke. Mr. President: The city of Alameda, through a Board of Freeholders, has just completed the framing of a new charter, which has been regarded by the freeholders themselves and by others who are interested, as being perhaps the last word on new charters in the State. The Mayor appointed a Bureau of Municipal Reference about eighteen months ago, and when the

question of new charter was subsequently agitated, the City Council passed a resolution requesting this Bureau to gather data and make recommendations to the Board of Freeholders, which it was anticipated would soon be elected. This Bureau of Municipal Reference, of which I have the honor to be chairman, had a number of meetings, and reached the conclusion that perhaps their efforts might be entirely in vain, if the proper kind of freeholders were not elected. And believing that the Bureau should make some effort to arouse public interest, in order that proper men be selected for the Board of Freeholders, at the suggestion of the Bureau, the Chamber of Commerce, which was presided over by a gentleman who was an enthusiastic and ardent advocate of a modern charter, called a meeting of representatives of all the civic bodies of Alameda, and organized what was known and what has been since termed the "New Charter League," its primary object being to take means to select a representative Board of Freeholders. This New Charter League organized and adopted a little constitution, and provided in that constitution the appointment of a committee of nine on nominations. That committee of nine assembled and combed the entire city for the best material, finally coming in with a recommendation that a certain fifteen gentlemen whom they named, should be the nominees of the New Charter League. The recommendations of this committee of nine were adopted by the general body, and nominating petitions were immediately circulated among the membership, without necessitating any of the persons named getting out to secure signatures. They were put on a ballot, and the selections were approved to such an extent by the citizens that there was practically no opposition. The fifteen recommended by this body were the only men nominated for the Board of Freeholders. That Board of course was elected, and Hon. Frank Otis, former Assemblyman and Mayor, was chosen as chairman. The freeholders have just about concluded their labors. The revision committee was

ready to make its final report when I left for Visalia, and it has probably been made by this time.

There are several new features, in which I am sure you will be very much interested, which have been put into this charter, which we sincerely trust will be adopted by the people. In the first place, the Board adopted a general welfare clause instead of enumerating and specifying all the powers of the city. They have also adopted the preferential system of voting, and have incorporated in addition, two novel provisions, one in regard to the recall and the other what might be termed a scheme for securing official publicity of candidates' qualifications. The recall provision which has been adopted was taken, in part, from the provision in the Sacramento charter, which required the proponents of the recall to first publish a notice of their intention, to circulate petitions and give their reasons in not more than 200 words. The officer sought to be recalled has five days thereafter within which he may also file in not more than 200 words the reasons justifying his course. Then these are published simultaneously, and so circulated that the electors are made acquainted with the reasons pro and con the recall election. In Alameda's charter, the recall petition can be circulated only by verification deputies. No one can circulate a recall petition otherwise. First, the petition for recall, or the declaration of intention, must be filed, after which the reasons on behalf of the officer to be recalled, are also filed. Then the petitions are published. They are all numbered consecutively, and placed in the hands of verification deputies, who may be appointed by either of the parties interested. There may be two sets of petitions circulated, one for the recall of the officer, and one for his retention. And there will be no recall election unless proponents secure the requisite number. We believe that this recall provision is quite important. Some of the cities have already adopted provisions forbidding the circulation of petitions under any circumstances, requiring that they be deposited at cer-

tain public places. But this plan was not thought advisable for Alameda, because a large number of our voters are commuters, and it might make the recall practically prohibitive.

The other feature, regarding the publicity of candidates, is entirely novel. It requires the candidate to give a declaration of his history to some extent, to state something concerning his previous experience, and his qualifications to fill the office sought. He is required to say, among other things, whether or not he has ever had any previous experience in the kind of work he will be called upon to perform, in case he should be elected. He concludes by giving a reference to not more than twenty citizens who know something of his ability and qualifications. His replies are made under oath, published by the city and circulated with the sample ballot, the idea being that it will give the elector some authoritative means of ascertaining the comparative qualifications of the candidates. So long as municipal elections are absolutely non-partisan, and the electors have no organization to hold responsible, it has been felt that there should be some way to acquaint the electors with some authoritative information concerning the qualifications and character of those who are seeking their votes.

These novel features, which to some extent may be regarded as experimental, cannot do any worse than to fail to work as anticipated.

We believe that our charter is not only progressive, not only up to date, but perhaps a little ahead of the times. (Applause.)

The President: We have with us this morning, Mr. Mark C. Cohn, who is connected with the State Commission of Immigration and Housing, and who has kindly consented to give us a short paper on that general subject. In view of the fact that Mr. Chambers, our State Controller, is not here as yet, I will ask Mr. Cohn to take his place at this time.

Mr. Cohn: While I am on my feet here, I want to say that I will be very glad to take up with any of the delegates, or any of the other people pres-

ent, any of the work that is being done by this State Commission. It is a very big subject. It is a matter that needs a great deal of attention, and is a departure from the methods usually adopted, and therefore is something to be taken note of. While the attendance has been very good, San Francisco especially has had a very good attendance, down in the southern part of the State they could give a little bit better attendance than they have done heretofore, and the same in the interior cities. At least fourteen cities have been invited, and I have been sending communication after communication, and some of them have not even been acknowledged, and in some of those cities they have some very bad conditions. With very little effort, this might be changed altogether, and in that way take care of their property.

I thank you. (Applause.)

The President: There are some announcements to be made before we take an adjournment. I call your attention to the display which has been placed in the room to the left by the State Board of Health, in the way of a pure food exhibit, and I would ask you also to spend as much time as you can with these displays of materials for the various communities which have been put here by enterprising firms.

Mr. Orr then made announcement of the places of meeting of the various Sections, and of the plans for entertainment of the delegates by the City of Visalia.

Thereupon a recess was taken until two o'clock p. m.

WANTED

Position as City Engineer or City Manager or both, by competent graduate engineer, wide experience, now employed as City Engineer and Manager. Desire larger City.

Address

Pacific Municipalities

TUESDAY, OCTOBER 10, 1916,
2 O'CLOCK P. M.

President Wright: The next order of business is the report of city managers. We will now hear a report from Mr. T. W. Watson, City Manager of Glendale.

Mr. Watson. Mr. Chairman and Members of the Convention: The City of Glendale is operating under the general State law of California as a city of the sixth class. About two and one-half years ago the Board of Trustees created the office of City Manager. It came about this way: Glendale had grown from a city of fifteen hundred or two thousand very rapidly to a city of six thousand or more, and there was a great deal of city work to be looked after by the Trustees, as there always is in a rapidly growing city. It was taking considerable time of the members of the Board, more time than they could spare from their private business. I was a member of the Board of Trustees at the time, having been a member of the Board elected at the time the city was incorporated ten years ago, serving continuously from that time until appointed to the present office and being the oldest member of the Board in term of service, also being a little more accessible than most of the other members, three of whom had places of business in Los Angeles, it was taking up a great deal of my time, in fact, almost half of my time was devoted to city affairs, and I felt as though I could not give so much time to city work and told the members of the Board that I would have to resign, having planned to extend the business that I was engaged in at that time and it would require all of my time. The other four members, after discussing the matter themselves asked me if I would serve as City Manager if such an office were created and a salary paid sufficient to allow of the devoting of all my time to city affairs. After considering the matter for a time I stated I would accept the office if such office were created at a salary not to be less than \$1800.00 per year.

At that time we had a very good city

organization.* The work of the city was being taken care of very well, but there were general matters coming up all the time, small matters some of them and some of them larger, that required individual attention. **In the sixth class city the Board of Trustees meet once a week, (at least ours does) and for a couple of hours gives consideration to city affairs and adjourns for the week. There is really no head to the city government during the rest of the week. The various departments are left to operate independently.** It was felt by our Board of Trustees that there should be someone in charge all of the time, who had general authority and supervision, with whom department heads could consult and with whom they could plan their work. I took charge under these circumstances. The ordinance under which we are operating is a very simple one. We did not find it necessary to make many changes in the personnel of the city government at the time, in fact, the object of the Board in creating the office of City Manager was to add to what we already had. Our general plan is as follows:

Our city government is divided into two distinct divisions, viz: Legislative and Administrative. The Board of Trustees is the legislative authority of our city, which body determines all matters of policy, outlining general plans for the carrying out of those policies and authorizing all expenditures of money, etc. Upon the administrative division is placed the responsibility for carrying out the general policy adopted by the legislative body as expressed in ordinances, resolutions and special orders. This division is divided into three distinct departments—said departmental divisions being based on the respective functions performed by each division and their distinctive sources of revenue. These departments are, Public Welfare, Public Works and Public Service.

We will discuss these departments briefly in the reverse of the order named:

Taking first the Public Service Department: This department was organized for the purpose of taking care of

our public utilities, such as water, electric light or any other utility that the city may acquire. Its object is to give the people the best service at the lowest rates possible consistent with good business judgment. The department is well organized and prosperous, also conducted on the most modern lines of business, and with its competent manager and able assistants is giving the people of Glendale excellent service, saving twenty-five thousand dollars per year in reduced rates and making a handsome profit as shown by reports. We did not find it necessary to make any changes in the relation of this department to the general work of the city when the office of City Manager was created. The Manager of the Public Service is, in fact, in complete control of the operation of that division of the city work, and I believe we have in our Public Service Department a concrete example of the fact that it is entirely possible to create and maintain a department of city administration operated absolutely on business lines with all politics entirely eliminated. If all city affairs were looked upon as purely business matters as the affairs of this department are and Managers of all departments were given the same free hand to operate their departments free from politics, in my opinion, the same high degree of efficiency could be obtained in the operation of all departments of city activities. I believe I can truthfully say that the policy of every Board of Trustees that the City of Glendale has had since the city was organized in the main has been along the lines just stated. They have always been willing to give those whom they have appointed to positions of responsibility a free hand in carrying out their policies after they have been adopted and the general plan outlined and agreed upon.

Public Works Department: This department has to do with all matters pertaining to the acquiring of right of way for streets, establishing official grades, preparing all proceedings for public construction and is charged with responsibility for the execution of all contracts in relation thereto. In our

opinion this department should always be kept entirely separate in its organization and management from any other department of city activity as its function is primarily to construct improvements which directly add to the value of property, the cost of which is directly assessed to the property benefited. This department is under the management of our City Engineer. About a hundred thousand dollars per year of new construction has been completed under the direction of this department for the last three years.

Public Welfare Department: All of the departments of our city which are supported financially by the general tax levy, such as repair and maintenance of streets, Police Department, Fire Department, Health Department and Forestry Department, we have designated the Public Welfare Department. We believe there is economy in organizing these various functions into one department for administrative purposes. Of course, in a very large city it would probably not work out as well as in the smaller cities. We have not found that this plan has made it necessary to make changes in the heads of the departments composing of our Public Welfare Department. The Public Welfare Department as we have it organized allows of a greater degree of co-operation between these various sub-departments than could prevail otherwise, and results in economy in the cost of operation; also enables the heads of these sub-departments to devote more of their time to outside work than would be possible if each one was compelled to maintain an independent office at all times.

All of our Boards of Trustees since the city was first organized have been composed of such men as recognize the value of a distinct division between the legislative and administrative functions of city government, and I believe this principle so well established in our city government, has done a great deal toward the establishing and maintaining of the present efficient organization.

Now I think in a general way I have given you an idea of our form of gov-

ernment. It is my opinion that under the law providing for sixth class cities, it is possible to have a very efficient city government, and that it may all be provided for by ordinances which the Board of Trustees have the power to enact. **I will say, however, that I believe it might be well to have a general State law providing for the office of City Manager in sixth class cities, which law could be made operative in a sixth class city by a majority vote by the qualified electors.**

We have found that in our position in Glendale we are able to assist in a great deal that goes on of general interest in the city. We find that by working with citizens' committees and civic organizations, a great many matters are taken up and brought to a successful issue, some of them matters that have been under consideration for a long time. During this last year, the matter of opening and improving one of our main thoroughfares to the north of our city which had been under consideration for a long time was brought to the point where all parties have agreed as to the work, the contract for same has now been let and the construction under way. This was a very difficult matter to handle, involving the acquiring of right of way for street purposes and for railroads and the re-location of two railroad companies' tracks. We had to get the companies to move their tracks and take other positions in the street. By working together with citizens and with our Public Works Department these different interests were brought together and agreement reached whereby a street which has been much needed for thirty years will be constructed within the next few months.

I have in mind another very difficult matter involving the entire eastern section of our city for a long time, viz: the taking care of the storm water of the Sycamore Cañon Wash. For some years the people of that section had been discussing the matter, and were divided in their opinions as to what should be done. Working with a citizens' committee and our Public Works Department, this matter was solved to

the extent that the most difficult part of it has been accomplished, the bringing together of the people to work along one line. Different ideas have been brought up and discussed and a final conclusion seems to have been reached as to what they want to do, and the proceedings are now under way for the opening of a street and later improving that street so as to take care of the water—the proceedings have passed the time for protest, and there is no doubt but that the project will go through.

I think the City Manager will naturally work along the lines that he is best fitted for and along the lines of his choice; the scope of action is so broad that there is ample opportunity for the full employment of one's powers along whatever particular line one may choose, whether the City Manager be an engineer, an attorney or a certified accountant, or if he is a man of general training in business affairs. I do think that the general business experience and training is the most necessary of all, for after all is said and done, the business of city management is more a matter of financing than anything else. Sometimes people stand back a little from advice given them by men trained along the technical and professional lines, when they will accept advice given them by men of affairs who meet with them as one of them.

In the construction of a new charter, I believe it would be well to keep in mind that the first element in a charter is your bill of rights, as a city under the constitution to do certain things. Your endeavors should be to secure the fullest power obtainable under the constitution. I do not believe after you have obtained these powers in limiting your scope of action with much detail in your charter. After we have our general grant from the State, we should reserve the right in our charter to create such offices as are needed by ordinance, or by general vote of the people and to provide such systems of voting, etc., as we may see fit. If we desire to make changes from time to time these changes can be made by our city council or by vote of the city elec-

tors without amendments to our charter.

Mr. Chairman, I thank you.

The President: It might be well, before taking up the next manager's report, to offer an opportunity at this time for anybody who wishes to ask Mr. Watson some questions as to his system down there, as may be wished—such as the question of tree planting. I understand it has been made quite a success in Glendale. There may be some other points on which you would like a little further light. I am sure Mr. Watson would be glad to tell something on any particular subject. Would you give us something, Mr. Watson, on the matter of tree planting in Glendale—how that is done down there?

Mr. Watson: Mr. Chairman, we have planted several hundred trees under the Tree Planting Act of 1913. We selected a couple of streets upon which there were very few trees growing at the time, believing that we could get the people together on a plan of tree planting for these streets easier than on other streets where there were a great many different varieties of trees growing already. We had very little difficulty in securing the co-operation of the people along these streets. We planted something over four hundred trees on the two streets, the average cost of which was \$1.25 per tree, including planting and care for a year. The city is now taking care of these trees, in fact, we have provided this year for a City Forester, who is giving all of his time to the care of our street trees. We have also established a municipal nursery in which we have propagated two thousand young trees. We expect to plant most of these trees this winter and next spring upon our street parkings. We are not expecting to operate under the Tree Planting Act of 1913, however; the trees are grown by the city at a very small expense, and we are expecting our City Forester to plant them with the aid of citizens in the district in which they may be planted. We are just now planning to plant some of these trees in one large district of our city. We have interested one of our civic organizations in our plan, a

day has been set apart for tree planting in this district, and with the assistance of the residents of the district working through their civic organization, we expect to plant the entire section in one day, placing one tree in front of every fifty-foot lot. By this plan, we believe that we are following the lines of least resistance and will accomplish more in the way of tree planting and at the least expense than in any other way. In other words, we believe that it is best for the city to propagate the trees and to employ a City Forester to plant them at the general expense, enlisting the interest of the people to help in the planting and care of the trees the first year, after which the Forestry Department should care for them.

I have heard the man with the vacant lot spoken of in this connection. It is said that he just holds off for a fancy price and makes no improvements. That is true in a way, and yet you know the man with the vacant lot gets very little for his taxes. He gets no fire protection. He has nothing on his lot to burn but a few weeds and now the city burns them off and charges him for it. He needs no police protection, requires no garbage service, and in fact he thinks he gets very little in return for his taxes. I do not agree with him entirely as to that, but I do believe that a dollar or two spent for planting a tree and taking care of it in front of his lot is a dollar spent in the interest of the whole community, and is a service that he is entitled to.

The Tree Planting Act of 1913 as amended in 1915 affords a very good plan for tree planting and cities not equipped to do their own tree planting may very well take advantage of this law to increase the number of shade trees in their street parkings.

The Secretary: What varieties of trees do you recommend planting?

Mr. Watson: We have planted mostly acacia, pepper and camphor trees in our city. There are a great many palms, however, some Monterey pines and a few Monterey cypress. There have been a great many California live oaks planted of late. These trees all

do well in our neighborhood. I am only acquainted with the southern part of the State, and I would suggest that any desiring general information on this subject, write the State Forester. We are going to plant a great many California live oaks in the near future. If they are well taken care of they grow quite rapidly and make very beautiful trees.

Mr. Robert B. Ray, City Engineer of Bakersfield: I should like to ask Mr. Watson if the city exercises authority as to the variety of trees planted, or whether it is left to the discretion of the property owners. Does the City Forester decide what trees shall be planted, regardless of what the property owners want?

Mr. Watson: I would say that if the City Forester has the trees, and he says to the people, "I have a very nice bunch of trees of a certain variety, and I want to plant some of them on your street. It will not cost you anything," they will all want that variety, very likely. Under the other plan, you circulate a petition and ask them to agree on a tree, they will all have different ideas, and an agreement in some cases is next to impossible. If you undertake to be very arbitrary in the matter of regulating tree planting, especially where the people pay for the trees themselves, you very often retard the movement.

Mr. J. L. Campbell, of Selma: How do you take care of the weeds on vacant property—at the expense of the city or of the property owner?

Mr. Watson: At the expense of the property owner. **We have been operating under the new State law, which gives the city authority to declare weeds growing on city lots to be a public nuisance and to abate the nuisance at the expense of the property owner.** We have operated under this law for two years and our people seem to accept it, in fact, there is practically no opposition to it. It is a very delicate matter, however, and one that requires a great deal of care and patience in handling. We have kept the cost down, which has, no doubt, been responsible for the lack of opposition which we

have incurred. **Last year it cost an average of \$1.23 per lot, this year the cost has averaged \$1.05 per lot.**

The President: Gentlemen, we have another city manager with us, Mr. W. M. Morgan, of Bakersfield, and I will ask him to step to the platform and give us something of the experiences that Bakersfield has had with the city managership plan.

Mr. W. M. Morgan, City Manager of Bakersfield: Mr. President, I am not a public speaker, and I have no speech to deliver, so what I am going to say would sound a lot better if you let me say it from the floor. I feel, when I take the platform, as if I were there under false pretenses, because it looks as if I were going to make a speech. I came here mainly with the hope of hearing Professor Reed on the city manager form of municipal government, because I expected to get a great deal of useful information from that address. I hope that he may arrive later and give us his talk upon the subject before I have to go home.

I was very much interested in Mr. Handley's excellent address, but I noticed running through it a certain note of pessimism, and from the start I want to inject a little optimism into my talk to counteract it.

Mr. Handley thinks we cannot make a success of the city manager form of government until we have a corps of trained experts. Now I am not an executive expert, nor a technical expert nor an expert of any sort. Moreover, we started our experiment in the city manager form of government in Bakersfield under what I think were perhaps as unfavorable circumstances as could well be found in any city in the State. In spite of all that, we are making a very decided success of the system, I think. At least we are doing quite a little more in the way of public service than they ever did before in our city.

We have put the Police Department of Bakersfield on a much more efficient basis. We have added an Identification Bureau, with a man in charge to whom we pay a fair salary. We have

taken over the work of the Associated Charities, and all the people in the city who formerly were supplied with provisions and clothing by the Associated Charities are taken care of out of the city fund. We also added a school nurse to the Health Department, and made the Health Department much more effective, enlarged it and increased its scope, established a city laboratory. We have a free employment bureau and a municipal lodging house, and have given every man who has applied a place to sleep.

Under the new charter, we are required to pay a minimum wage of \$3.00 per day to all laborers in the city employ, whereas they paid formerly \$2.50.

With all of these extra expenses, we expended last year for current cost of government, \$27,000 less than the previous year. So we think we are getting results, even though we haven't a technical man nor an efficiency expert, nor any sort of an expert for Manager.

I think Mr. Watson has the right idea when he says that the main thing is

having somebody on the job all the time; somebody that can take up matters at any time, and when any complaints or any question comes up for decision, make the decision. In a majority of cases, it is better to have the decision made promptly, even though it is not made by so wise a head, or if it is made by one man, than to have it delayed until the weekly meeting of the Council and threshed over by five or seven men. And, too, one man on the job all the time can keep in touch with all the departments and know what is going on in each department very much better than any five trustees or councilmen can possibly do where they meet but once a week and are occupied all the rest of the time with their own private affairs. So with this plan you have somebody looking after matters all the time, and even if he is of a common, ordinary type, you get better results than if you let matters go from one meeting to the other for action by the trustees.

I want to repeat that I have no speech to make to you, so my talk is not in any sense arranged, and I will

7 REASONS

why dealers should advertise in

Pacific Municipalities

- 1—Pacific Municipalities is the only magazine on the Pacific Coast which is devoted exclusively to municipal engineering and contracting.
- 2—Pacific Municipalities has a larger circulation than any other magazine of its kind in the country.
- 3—Pacific Municipalities is the official organ of the League of California Municipalities which, according to the National Municipal League, is the most successful organization of its kind in the United States.
- 4—Pacific Municipalities reaches every city official of the State of California, and all the leading contractors and engineers of the Pacific Coast.
- 5—Pacific Municipalities maintains for its advertisers a free up-to-date information bureau of proposed work and supplies needed.
- 6—Advertisements in Pacific Municipalities are money makers.
- 7—The rates in Pacific Municipalities are right.

have to tell you of things as I think of them.

In the matter of paying bills, by having the machinery of government going all the time, our bills are paid promptly every week. That is, if a bill is filed with the city as late as Friday, it is ready for payment the next Monday night—or even if it comes in on Saturday, if it is urgent, we can handle it. The cash is available, then, on the morning following the Council meeting—Tuesday morning. That means that we are able to get all the discounts there are for cash or for ready payment, so that we get wholesale prices for everything we buy, and the merchants are glad to give us very good prices. **Our representative of a wholesale house in San Francisco—I don't know whether he was saying this particularly to please me or not, but he said Bakersfield had the reputation among San Francisco firms of paying its bills with exceptional promptness.** You don't have to make an affidavit that you have sold the city certain goods, or go through any form of that kind. You don't have to go before a notary public, or take any such trouble as that. You merely send your bill in duplicate, and immediately after the Council meets the next Monday, you get your check for it, or your warrant. They appreciate that, and we get better prices because of it.

I said that we started under very unfavorable circumstances in Bakersfield. Perhaps some of you know about the two-years' war we had down our way some time ago. Perhaps some of you don't, but it was hot enough to crowd the European War news all off the front pages of the local press. The way our new charter came about was like this. We had been operating under the fifth-class charter that the State law provides and the town had grown to a population of 20,000 people, partly by consolidating two towns. We had Bakersfield and Kern, two business centers, with a mile and a half or two miles between, but they had grown together, and when they were consolidated, it seemed to everybody that our charter was not up to the size of the town. So there was a movement for adopting a freeholders' charter, and

about the time this movement was started, a moral reform, or moral crusade was inaugurated also. Then came the adoption of the charter and the election of the new board simultaneously with this crusade. You all know what a campaign is when the moral issue is involved at all. We had one election after another for a period of two years. So it was that the new Council took its seat just about the conclusion of this long series of campaigns. It was an unfavorable time, of course, to launch any new system of government, because the hostilities that always arise under those circumstances were there, and the generally unsettled feeling in the community did not promise very much for the community acting harmoniously along any line.

I might just as well state briefly, as I started out to do, things that have come up with us. The first thing we had to do was to demonstrate what we could accomplish in the way of moral reform. I was very fortunate in the appointment of the Chief of Police. He is a big, fine looking man, with broad shoulders, and a pretty big neck, and when he thinks a thing ought to be done, he goes about it in a direct, vigorous way without wasting too much time on technicalities.

Our first problem was what to be done with the redlight district. During the course of this moral crusade, the redlight district had been hammered pretty well to pieces. It was up to us to finish the job and remove the wreckage. We have done that. There is not a house of illfame anywhere in Bakersfield at the present time, and the people with almost no exceptions have accepted the change. They have gotten to the point where they know and realize that the town is very much better off now than it was with the former condition, when the redlight district prevailed.

Very soon after we got started under the new charter a wet and dry election was inaugurated, on top of the previous two years of campaigning, and that added a little more to the turmoil of the situation.

I want to say to you that, in the enforcement of our laws, we adopted the plan of doing it just as quietly and with just as little cause for reasonable offense as possible. **I told the Chief of Police, "We will hold this situation firmly and we will enforce the law thoroughly and impartially, but we will do it with just as little publicity and fuss as possible."** We haven't had any trouble. There have been very few raids or sensational arrests. The Police Department has figured less in the public print in the last year and a half than ever before since I have known anything about Bakersfield, a period of twenty-five years. I have lived there fourteen years.

Along the same line of helping to restore the community equilibrium, the idea occurred to me that we would interest the public in some other line of work beside reform. So we got busy on the unpaved streets. The Council in office previously had carried on a very successful and extended campaign of street paving, so that we had a pretty good line of paved streets, about as much as the property owners felt like paying for, particularly with the hard times coming on. So we turned our attention mainly to taking care of the unpaved or oiled streets. I think we have solved that problem, or are solving it, very thoroughly. I think we have the cost of keeping oiled streets in repair down pretty well. I am almost ashamed to tell you how little it does cost.

Then we had our new departments to get established—the Charity Department, and the school nurse work, and the other things that we wanted to bring on of that sort. We tried to interest the people in these things, but the wet and dry campaign coming on just at this juncture blocked these plans for creating a new center of community interest, so we have just gone ahead mainly with projects which we could handle within the administration, without trying to start any public movement, such as building municipal auditoriums—and I want to congratulate the City of Visalia on this fine building, while I am speaking about it. It certainly is a very handsome build-

ing, and I wish we had one just like it in Bakersfield. If we had we would invite you down to dedicate that also, next year. I don't think, however, we will have one by that time.

The Manager of Bakersfield has the appointment of the Police Chief, the Fire Chief, the Building Inspector, City Engineer and all other heads of department and department employees. All administrative departments are under his supervision, and he is the city purchasing agent. So we have the whole organization of the city brought compactly under view. The Auditor, of course, keeps the official books, but in our office we keep a record of everything that is purchased, so that, instead of knowing only what bills have been paid for each department, we know what bills have been incurred at any time. That is to say, if we buy a filing case, or a spreader wagon, or a piece of road machinery, or anything of that kind now, and it is not delivered, perhaps, for two or three months, we know we have spent that money just the same as though the bills had been paid. In that way we are able to keep a more accurate check on the expenditures of the departments, and in that way we help keep within the budget a little better than if we had to depend upon the Auditor only. **The city, before the new charter, never had such a thing as a segregation ledger. There were no separate accounts for anything at all. When the City Clerk made his report to the State Controller, he was obliged to go through all the warrants for the past year.** Just as the new Council went into office, we put in a new accounting system, and so we have our accounts very thoroughly up to date, and in other ways we are bringing the city government up to modern business methods.

I don't know as there is anything else in particular that I could say. If anyone will ask me any questions, I will certainly try to answer them.

We had some experience with the jitney problem, and solved that, very fortunately, by putting the jitneys under bond, and by confining them to certain routes and certain schedules.

The jitney drivers decided that they could not give the bond, nor did they care to maintain exact routes, according to schedule, and so nobody ever applied for a license. (Applause.)

Mr. Locke: I would like to ask the gentleman a question. I understand that you make great savings in the purchase of supplies, and also in regard to your streets, so much so that in the repair of streets you are almost ashamed to give the figures. I would like to know very much if you attribute these savings to the system, that is, the manager system of government; also just how much you have succeeded in saving in the paving of streets.

Mr. Morgan: Not in paving—

Mr. Locke: I mean repairing.

Mr. Morgan: We manage to get our streets oiled for half a cent a square foot, and we have been repairing our old oiled streets for 30 cents to 80 cents a thousand square feet—something like that. We have roughly graded and oiled a number of streets for about a cent a square foot.

Mr. Locke: Are you purchasing agent as well as Manager?

Mr. Morgan: Yes. Of course, the figure that I mentioned for grading and oiling was not for putting the streets on official grade, but simply rounding them up with a road grader and oiling them. I am told by what I suppose is very good authority, that the proportion of paved streets in most cities is not over one to four. That is, for every mile of paved streets you have four miles of oiled streets or streets not improved at all. So the matter of maintaining the unpaved streets is a very large problem. In fact, for a street department, it is a greater problem by far than the paving of streets, because our paving is ordinarily done by contractors, or, if it is done by the city, it is done by certain well-known standards and formulas, and there is no deviation from them.

Mr. Locke: I would like to ask you this question: Do you attribute these economies to the system, that is, do you consider that the manager form of government enables more economy than other systems—I will put it that way?

Mr. Morgan: Well, under the old system, of course, the city could have a purchasing agent, and I will say that I don't think it would be impossible for the older plan to be as efficient as the city manager plan. But I think it is much easier when you have some one on the job all the time, some person to whom every kind of city business may be brought and with whom you may discuss it. It is an advantage to the manager to know what the police department is doing, and what each different department is doing, because they are all inter-related. For instance, the work of the police department overlaps that of the charity workers, and so on.

Mr. Locke: Have you a Mayor?

Mr. Morgan: We have seven Councilmen, and the Council has to select one of its members as Mayor. The Mayor's duties are to preside at the meetings of the Council, and to officiate in a public capacity as Mayor. If our Mayor were here, for instance, he would be able to make you a speech.

Mr. Kerrigan: Do the members of the Council receive compensation?

Mr. Morgan: \$50 a month.

Mr. Kerrigan: I would like to ask if you have a Superintendent of Streets under your supervision?

Mr. Morgan: Yes, we have a Superintendent of Streets—a City Engineer and Superintendent of Streets.

Mr. Kerrigan: Combined in one?

Mr. Morgan: Combined in one, yes.

Mr. Kerrigan: And what salary is he paid?

Mr. Morgan: We pay the Engineer and Street Superintendent \$200 a month.

Mr. Kerrigan: Does the City of Bakersfield own its own water supply, Mr. Morgan?

Mr. Morgan: No, the City owns no public utilities whatever. But there is to be an election soon to vote bonds for the purchase of a water system that is supplying a portion of the town, the portion formerly known as Kern City.

Mr. Charles N. Kirkbride, of San Mateo: Have you fired any influential city employee in your experience?

Mr. Morgan: Have I fired any? I

have not had that painful duty to perform.

The Secretary: To what extent have the people accepted this plan? Is there any disposition to criticize either the Manager or the system?

Mr. Morgan: I supposed that question probably would not come up after the talk I made about the political situation under which we started. There has been a very decided disposition to criticize the Manager in certain quarters, although I may modestly say that the criticism has narrowed down to a smaller and smaller number of people all the time. One of the essential qualities of a Manager is to be able to stand a whole lot of criticism without worrying about it very much. (Laughter.) Another interesting thing about criticism: one of the things we thought we ought to do was to readjust the matter of assessment. It was our opinion that the assessment of lands was on a very much lower rate or proportion of actual value than the assessment of other forms of property. So one of the first things the City Assessor did under the new administration was to raise the valuations on all lands. That was last year. This year the City Assessor made a thorough reassessment of city property. In former years the city copied the county assessment, but this year the Assessor, as I say, made a thorough reassessment. The result has been that the valuation of lands has been raised about 133 per cent in the two years, while the other property has been raised very much less than that. The new assessment is made on the basis of 60 per cent of the conservative market value, as nearly as the Assessor could ascertain. This movement on the part of the new administration met with very great disfavor in certain quarters, and the result was that some of the large land owners declined to pay their taxes last year. They attacked the validity of the tax, and the city won the suit in the Superior Court, and it is now on appeal. We have \$46,000 delinquent taxes, so we are as-

simulating a \$46,000 delinquent tax roll in connection with our other troubles. However, we are getting by. We will not have to borrow any money, and we will pay all our bills as they come in.

Mr. Locke: I think Mr. Kirkbride touched upon a very important phase of this city manager scheme. It has been said that the weakness of this scheme of government, as a practical matter, is that the council will perhaps attempt to dictate appointments to the manager. The manager is appointed by them, but that appointment may have as one consideration the fact that he must accept dictation from them on appointments. With this idea in mind, the freeholders of the City of Alameda, in framing their new charter, put in a provision that any councilman attempting to so dictate will be subject to the loss of office, and also otherwise punishable. I believe it was made a misdemeanor. In addition to that, there was a proviso inserted that the City Manager could not be dismissed except by four-fifths of the Council. This may be an embarrassing question, and one you would not care to answer, Mr. Morgan, but if you are in a position to do so, I would like to know very much if any effort has been made on the part of the legislative body which appointed you to office, to dictate appointments?

Mr. Morgan: Of course, anybody who knows anything about the great American game of politics knows that seven Councilmen would have certain ideas as to whom they would like to have appointed. But I will say that there was very little trouble in that respect, and there was a thorough and distinct understanding at the outset. I knew before I was appointed, of course, some of the men they wanted to fill the other places. But it was thoroughly understood that there should be no interference whatever in the matter of removals. It so happened that in the case of the very few men I was asked to appoint the selections were wholly satisfactory to me, but every one of them was appointed with the distinct understanding that if he did not fill the job to my satisfaction, there would be no

question of my right to discharge him without any dictation whatever. There has been no trouble in that respect. I was not required to appoint anybody that I didn't want to appoint and to whose appointment I could not properly consent. Of course, I don't suppose it would be possible in any city, unless it were the heavenly city, to elect seven Councilmen and have them turn over all the appointments absolutely to somebody else, without ever making a suggestion as to who should receive the appointments.

Mr. Locke: They hold you responsible, don't they?

Mr. Morgan: They hold me responsible, and as I say, I am at absolute liberty to discharge any man who does not fill the bill, in my view.

City Attorney A. D. Mitchell, of Ontario: Is the saving in administrative cost sufficient to make up the amount of the salary of the City Manager?

Mr. Morgan: **We spent \$27,000 less last year than we did the year before, and I need not say to you that that is more than my salary.** (Applause)

THE CITY MANAGER PLAN IN SAN JOSE

By THOS. H. REED, City Manager.

Note—Professor Reed's speech was delivered at the Spanish Banquet given to the delegates Thursday evening, October 12th.

Mr. Toastmaster and friends: At the outset, I want to express my appreciation of this beautiful auditorium in which we meet tonight. It is a wonderful thing for a community the size of Visalia to have a building so complete, commodious, and so generally useful as this one is destined to be. (Applause.) From what I have seen of them, I should judge that these Visalia people are a splendid lot of folks. I think we all owe them a debt of gratitude for the excellent entertainment they have given us from the moment of our arrival here. Among other things, I had an automobile ride this afternoon such as I have never experienced before. It was a good deal like being shot out of the muzzle of a 42-centimetre gun over a quarter-section of Paradise. It was perfectly wonderful—a combination of terror and awed appreciation of the beautiful. There was a large amount of awe about it for me, because I lost at least a year's growth and several heads of hair—and what there is left of the hair has turned gray.

I have had a brief experience as City Manager of San Jose, and I am informed that I am to tell you tonight what I would have said had I read you a paper or talked to you at the regular session of the Convention at which I was scheduled to appear. It will of course seem personal on my part, but

from the nature of the topic assigned it cannot well be otherwise. Will therefore without further apology give you a bit of the experience of a city manager in a city which, while it is no mean city, has been infested, I think, in the past, by some of the meanest politics that has been perpetrated in any portion of the State of California.

Before turning to San Jose, however, I want to say, in a general way, that there is every reason to be encouraged with the development of municipal government in California. The kind of a gathering that we have here now in Visalia, the earnestness and the studiousness with which the members of this Convention address themselves to the problems that are presented to them, the improved character of the delegates who gather from year to year at these Conventions—they were always good, but they get better and better as time goes on—all speaks of that progressive improvement in municipal affairs in California which we all have hoped for. **Mr. Bryce, if he had to write "The American Commonwealth" over again, could not say that our municipal government was our one big political disgrace.**

Indeed, municipal government today, generally speaking, is the best government we have. Our state government, our county government, even our na-

tional government, do not show the signs of progress that are to be found all about us in municipal government. We have experimented in municipal government to a great degree, but our experiments have been working out, and we are going forward. While we do seem to love new things, the new things seem to be good things.

Now, I went down to become a city manager as an entirely innocent college professor—and the college professor is reputed to be a peculiarly innocent type of man. I had drawn the charter of the City of San Jose, and had been interested in the problem of the city manager form of government theoretically, and where I had the opportunity offered me to try to work the theory out practically, I accepted. I was warned by my own brother, for example, that I had always been a theoretical man, and that therefore I should hesitate to tackle a practical job. And, of course, lots of people said, "Oh, he's just a professor." All of which roused my pride, and made me want to do it all the more. And whether I win or lose, at any rate, I am going to make one good, hard try at it, and there will be some satisfaction in that—at least for me.

The city manager form of government, theoretically, means that the city council employs a manager who bears the same relation to the city council that the general manager of a corporation bears to its board of directors. He, in turn, appoints and is responsible for the other officers of the municipality. In San Jose, with the exception of the City Auditor and Police Judge, who are elected by the people, and the City Clerk, who is appointed by the Council, and the Civil Service Commission and City Planning Commission, each being a little aside from the ordinary cases of administration, the officers are all appointed by the manager, including the members of the Board of Education, and Library trustees. The manager may remove any member of the city administration. That is, his power is absolute, so far as the administrative side of the matter is concerned. So long as he is in favor with the council, so long as they respect his judgment, he is in

command, and he is responsible for what goes well or what goes ill in the institution.

Now, I did not know whether the plan would work or not, of course, no more than any one else. I thought it would. It seemed to be sensible. It seemed to be reasonable. It was the form of organization which we had found most successful in private corporations and school districts and in the government of many of our State institutions, where the governing board employs some one to carry out its functions. And so far, if three months is in any wise a fair test, it has worked well. Nobody has got up a lynching party yet. There have been no very determined protests or serious denunciations. Everything has been sweet and pleasant.

We have not accomplished wonders yet. I think that every man who undertakes a task of this kind, indeed, every man who goes into any municipal office, feels that the first thing that he wants to impress upon the public is that they must wait a reasonable time for results. The public has a peculiar habit of expecting that a reform administration, when it comes into office, is going to succeed in a few weeks in revolutionizing the course of years and years of municipal development. That can not be done. It is a slow job to reverse the wheels and make them revolve in the opposite direction, smoothly and without friction. We have proceeded slowly in San Jose. **We did abolish the office of City Treasurer as a paid office, and deposited the funds of the City in one of the banks at 2.52 per cent interest on average daily balances. The bank was tickled to death to take the money at that rate, not so much because they wanted the money, but because they wanted the advertisement of having their cashier designated as City Treasurer. We saved the City of San Jose about \$5,000 a year by that transaction.**

We have installed a modern system of purchasing, buying on scientific principles. We have already made reforms which will result in a saving of approximately a thousand dollars a month merely on supplies that are bought for the City of San Jose.

We have reformed some of our de-

partments, for example, the Health Department, in which formerly we had a Health Officer, a doctor who gave such of his time as he could for a salary of \$100 a month. A busy practicing physician of a successful sort is not able to give very much of his time for that compensation. Under those circumstances you can well realize that our health department was inadequate for the needs of a city of 40,000 population. We have now a thoroughly organized public health department, with a full-time deputy health officer, occupying all of his time in the work of the city, and we are putting that department on a basis where it will be able to stand at the front of all the health departments in the State of California.

We wanted to get a man for the health department, to take charge of the work, and a lot of our people said, "You must take him from San Jose." We said, "No. We will give an examination, an open, competitive examination, for the position of assistant health officer, and we will fill that place with the best man that comes forward to take the examination, irrespective of where he comes from." And Mr. Gray, at that time health officer of Palo Alto, came forward and took the examination, and passed it with 100 per cent, and we appointed him. We feel that we have a prize in Mr. Gray, who is not a physician but a civil and sanitary engineer trained at the University of California to be a health officer. We have a health department that is moving like a buzz saw now into the bad health conditions. (Applause.)

We have done a number of other little things. We have secured the services of the firm of Haskins & Sells to install a modern accounting system. When I went down to San Jose, I discovered that it was almost impossible to find out how much the various services in the various departments had cost. No comparative data of an administrative sort, such as are laid upon the desk of the manager of a private corporation for his enlightenment in handling the affairs of his corporation, were to be had. We are going to have just that sort of thing. We are going to have the best and most up-to-date form of accounting that can be se-

cured, and it will be a form of accounting much more similar to that made use of in first-rate private corporations than the usual traditional forms of municipal accounting.

And then there are a lot of other little things that we have done—all kinds of things. A city manager is expected to do almost anything, apparently, from reconciling the marital difficulties of certain people in the population to straightening out the difficulties of saloon keepers. It all comes into the city manager's office, and as time goes on, there is more of it coming in. We have notified everybody in the city of San Jose to enter their complaints with the manager. We published that he could be reached at San Jose 88, and San Jose 88 wires are hot all day with this, that, and the other thing. We find out quite a lot by it. In the first place, we find out what we should do to satisfy the public, and in the second place, we find out something of what our various officials are doing in their official capacities. We get the outside opinion of view. There is one kind of a complaint, however, that we pay no attention to—I suppose you have all had acquaintance with it—and that is the anonymous complaint. It is a typical piece of American cowardice. People will come around and say, "Here is a gambling joint running down here, in defiance of law." "Here is a nuisance that damages the neighborhood." "All right. Come forward with the evidence, and we will shut up the gambling place; we will abate this nuisance." "Oh, no," they say, "Don't use my name. I am very glad to give you the information, but keep me out of it." It is a cowardly performance. The American people have the idea that public officials can vicariously atone for all the sins of the community. When they elect a man to public office, they feel that they have done all that is expected of them, and that these officers are going to solve the problem, alone and unaided. It can not be done.

We have learned some things about the city manager form of government. We have learned something about what its merits are. It has two merits. One is that it demands the careful and intelligent selection of the various officers to

fill the various positions. A manager must make good—that is all there is to it. It does not do him any good to play politics because he can not make good by playing politics. He must make good in his work. In order to make good in his work, he must select the right kind of men for subordinate positions. It means, in other words, that under the manager plan you get the right personnel in your city government.

Then there is another thing. It means that you have a single head. there is no place in this world for a two-headed man or a five-headed man, outside of a side show. They are interesting as objects of study, and as matter of scientific observation, just like a five-legged calf, but for the purposes of administration, they are bad. When you have a single head, you have the condition under which you can enforce responsibility, and responsibility is the most sobering and correcting influence in government.

Most of the evil in municipal government is the evil that is done by slovenly or careless, only infrequently by corrupt people, who are guilty of their particular pieces of carelessness and slovenliness in the dark—in the obscurity of divided responsibility.

I have learned one thing about drawing charters. **I would not draw a charter again in which the manager was made the ceremonial head of the city as well as the going executive head.** As a matter of fact, I was not responsible for that provision in our charter. Colonel McClure, who happened to be visiting San Jose, got that inserted in the charter in the hands of the Board of Freeholders. I think it is a mistake. The manager ought not to be obliged to welcome every thing and shake everybody's hand, and dedicate this and open that, and all that kind of thing. He has enough to do without having to be delivering himself of platitudes on all possible occasions.

We haven't done a great deal yet, naturally. We have just started to do things. We are correcting slowly. A lot of people question why we have not done more than we have, why we haven't changed more heads of departments and revolutionized more offices. We are proceeding slowly. We do not want to dis-

arrange the whole mechanism of the city government. We make changes only when we **know** they are going to work improvement. It is going to take us some time to work it out. You will be interested in watching the results. And they are going to be the best results that the hard and diligent service of myself and the men with me can give.

Somebody asked me the other day here if I was giving my whole time to the city of San Jose—if I was not running up to the University and giving some lectures, and so on. I told that man I was giving the whole of my time from eight o'clock in the morning until one o'clock the next morning, pretty steadily, to the affairs of the city of San Jose. That is the sort of thing that my assistants, my colleagues in the work are doing at the same time. In a few cases, where we have brought in a man from the outside to take a position in the government, people have said we were giving favors to outsiders. Now, I do not consider a job in the city government of San Jose a favor. If anybody thinks working 15 or 18 hours a day, is a sinecure, he is welcome to the impression, but it is a false one. The work of our city employes is hard work. Our positions are responsible and difficult. And we are getting together a mechanism of government that is going to move harmoniously and effectively for the interests of the public.

Now, we may not succeed. We may run into some great popular snag or other. We may be choked over night by some problem that may arise from the infinite vagaries of the public mind. Such things are beyond the ken of man to prophesy. But, given a fair chance, we are going to work it out.

And before I close, I am going to say that we of San Jose want you to come to San Jose for your convention next year for the purpose of seeing what we have done. We would like to be under your inspection. We want to assure you that we will be glad to present our results to that date to you at that time, and let you see for yourselves what has been accomplished. We want to assure you also that if you will deign to visit the incomparable Santa Clara Valley, the Garden City of Santa Clara Valley,

you will find there an open-hearted and open-doored hospitality, which even the citizens of Visalia, hospitable and public spirited as they have shown themselves to be, cannot surpass. The latch string will be out, and all the abundant resources of our community will be at your command.

I wish to thank you for the attention you have given me, and I want to bespeak from you your good wishes for the success of the experiment in municipal government which we in San Jose and other city managers throughout the State are working out. A great deal depends upon it, and a great deal upon the good will, the cordial co-operation, the friendly assistance, the prayers, if you will, of the good people who are engaged in the struggle for municipal righteousness and municipal efficiency throughout the State of California. To my mind, that is the thing which makes these gatherings most valuable. It is not the information that is handed from one to the other, but the feeling of friendliness, the rubbing shoulders together, the inspiration that comes from gathering together with a fine lot of people that are in the same work as yourself. We will go back home full of zeal and courage for the hard task that lies before us. (Applause.)

FRIDAY, OCTOBER 13, 1916.

BEFORE THE GENERAL BODY.

The Convention was called to order at ten o'clock a. m. by President Allen H. Wright.

The President: The first order of business this morning will be the report of the Committee on Resolutions. The Secretary will please read.

The Secretary: The report of the Committee on Resolutions, accompanying resolutions recommended to the body, is as follows:

"Visalia, Cal., Oct. 13, 1916.

League of California Municipalities,
Visalia, California.

Your Committee on Resolutions respectfully begs to report and herewith submits the following resolutions all of which are recommended to be passed by the Convention, together with such communications as have been received bear-

ing on the subjects contained in said resolutions.

Respectfully,
C. O. BOYNTON, Chairman,
I. W. WATSON,
T. W. FOWLER."

The first of the resolutions recommended to the Convention for passage is:

"Whereas, For a past number of years the League of California Municipalities at its annual sessions has through your able representative, former Mayor Mr. A. R. Orr, been invited to hold its convention in the city of Visalia, and

Whereas, Many and almost unheard of promises were made as an inducement to hold a convention of this League at the city of Visalia by said representative, and

Whereas, It was determined at the Eighteenth Annual Convention of the League of California Municipalities held at Oakland in 1915, that the 1916 Convention be held at Visalia, and

Whereas, It has been the extreme pleasure of a large delegation of representative officials, their wives and others of cities from the extreme northern to the extreme southern part of the State of California to attend this the Nineteenth Annual Convention of the League of California Municipalities at Visalia, and

Whereas, The promises and pledges of the City of Visalia made through its representative have been more than fulfilled beyond the most sanguine expectations; now therefore, be it

Resolved, That this convention commends the city of Visalia for the progressiveness shown in the way of public improvements and buildings, especially its Municipal Auditorium, which has greatly facilitated the work of this convention, and further be it

Resolved, That this Nineteenth Annual Convention of the League of California Municipalities in convention assembled, does hereby extend to the city of Visalia, its officials, citizens and representatives, its sincere thanks and appreciation for the hospitality extended, and the courtesies shown its delegates, all of which has been made through sacrifice of the citizenship of Visalia to make for this convention the grand success it has been."

The President: You have heard read the resolution. What will you do with it?

Mr. Locke: I move the adoption of the resolution, Mr. Chairman.

Mr. Robson: I second the motion.

The resolution carried unanimously.

The Secretary: The next resolution is as follows:

"Whereas, The November ballot will contain, for the approval or rejection by the voters, the proposition of a \$15,000,000 bond issue for the continuation of the excellent work on the State Highway system, and

Whereas, We realize that ease of travel and intercommunication between our municipalities and the bringing also of the rural districts into closer contact with the cities and markets is essential to the more efficient and intensified development of our State and cities, and

Whereas, The motor vehicle is more and more becoming the means not only of travel for pleasure, but for commerce as well, and

Whereas, Adequate arteries such as are provided and proposed to be provided are a great force tending to prevent congestion of our urban districts, and

Whereas, The beauties of our State, and its climate make it an ideal ground for the tourist, which we realize as being a great asset to our commonwealth, and that such a system of highways as proposed would greatly enhance the natural value to us of our attractions, therefore, be it

Resolved, By the League of California Municipalities, that we do most earnestly favor the issuance of said highway bonds, and be it further

Resolved, That the voters of the State be, and are hereby urged, to lend their suffrage to this important measure so necessary to the welfare of our State."

The President: Gentlemen, you have heard read the resolution endorsing the fifteen million dollar bond issue. What is your pleasure with reference to the resolution? It is understood that, in adopting the report of the Committee on any resolution, that makes it become the action of the League.

Mr. Hull: I move its adoption, Mr. President.

The motion was seconded and carried unanimously.

The Secretary: A resolution reading as follows:

"Whereas, The State of California, its Counties and Cities are spending vast sums of money for the building of good roads and paving streets, and

Whereas, The increasing tonnage and speed of trucks are proving destructive to our highways, and

Whereas, The counties of the southern part of the State initiated a movement to regulate the speed, width of tires and tonnage of trucks for the protection of these public improvements, therefore, be it

Resolved, By the League of California Municipalities; endorses this movement for the regulation of trucking, and

Resolved, That this League urges this Legislature to enact such laws as are necessary to protect our highways, and further be it

Resolved, That this League urge all the Cities and Towns of California to pass uniform regulations for the purpose of protecting their streets."

Mr. Wright: Gentlemen, what will you do with this resolution regarding truck regulation on the highways?

Mr. Barzellotti: I move its adoption, Mr. Chairman.

The motion was seconded from the floor and prevailed unanimously.

The Secretary: The next resolution in order is as follows:

"Whereas, The Highways Act of 1909 provides that each county shall pay the interest on the bonds the proceeds of which are spent within that county, and

Whereas, The cost of construction of our highways is apt to be greatest in those districts where the population (and hence the financial ability to shoulder this burden), is the smallest, and

Whereas, In some instances the interest cost thus assessed will be too great for the county to pay, or because of the nature of the construction will be an unjust demand upon the county, and

Whereas, Amendment Number Seven, appearing on the ballot in the coming November election, empowers the State Advisory Engineering Board to adjudicate and adjust these interest charges, with a view to relieving a county of that

portion of her interest burden which is unjust or too heavy to be borne, therefore, be it

Resolved, That the California League of Municipalities endorse this amendment, and exert its influence to secure its passage."

The President: What is the pleasure of the Convention as to this resolution?

Mr. Robson: I move its adoption, Mr. Chairman.

The motion was seconded and carried unanimously.

The Secretary: The next resolution relates to a change in term of office of Clerks, Auditors and Assessors, and reads as follows:

"Whereas, The department of Clerks, Auditors and Assessors have unanimously endorsed the proposition that the State law be amended, changing the term of office of Clerks, Assessors, Auditors and Treasurers from two years to four years, and

Whereas, The department of Clerks, Auditors and Assessors have requested that the main body of the League of California Municipalities endorse the proposed change, therefore, be it

Resolved, By the League of California Municipalities in convention assembled, that they heartily endorse the proposed change in the State law increasing the term of office of City Clerks, Assessors, Auditors and Treasurers, from two years to four years, and be it further

Resolved, By the League of California Municipalities that a copy of this resolution endorsing the proposed change be sent to the various Assemblymen and Senators at the next session of the State Legislature with the request that the matter receive their favorable consideration."

The President: This comes out of the Section of Clerks, Auditors and Assessors, and was referred to the Committee on Resolutions of the whole convention, and has been reported unanimously by the Committee. What is your pleasure?

Mr. Robson: I move its adoption, Mr. Chairman.

Mr. Handley: I second the motion.

Mr. Brock: I do not like to precipitate any discussion on a matter like this, but it seems to me this is not a wise proposition, unless you change the terms

of Trustees likewise, and as I understand it, the modern tendency is to appoint men to these offices rather than to elect them. In fact, Mr. President, I would like to move as a substitute to it that we recommend and endorse the proposition of appointing Treasurers and Clerks.

Mr. Edward F. Halbert: Being a City Clerk of a small town, Mr. Chairman, I have given a good deal of study to this matter in the last six years during which time I have been City Clerk, and I have also watched in the same respect the office of City Marshal. It has been our experience that we have gotten a greater efficiency from the office of City Marshal and also of Clerks and other offices, by having them come up for election every two years. It would be my idea, therefore, that we should put the Marshal back to an elective term instead of appointing him and the other officers. One reason for this is, that any time the Board of Trustees of a small town has the appointment of an officer, he has no chance whatever, because if he chances to interfere with some friend of a trustee, he is ditched. The result is that he does not know where he stands.

The President: Is there any further discussion of the resolution?

The question was put and the motion prevailed.

The President: The Secretary will read the next resolution.

The Secretary: The next resolution is as follows:

"Whereas, The University Extension Division of the University of California has maintained for the past three years a Bureau of Municipal Reference for the service and use of the city officials of the State; and

Whereas, The activities of said Bureau have ceased recently because of a vacancy in the Secretaryship; therefore, be it

Resolved, That the League of California Municipalities, believing that the continued application of the resources of the University of California to problems of municipal government is of prime importance to their wise and satisfactory solution, petition the Director of the University Extension Division to appoint a Secretary at the earliest possible moment to resume and develop the ac-

tivities of said Bureau; and further be it

Resolved, That the League's Legislative Committee urge the State Legislature to provide financial support adequate for the maintenance of said Bureau."

The President: What will you do with this recommendation? It comes from the Resolutions Committee relative to extension work.

Mr. Reed: I move its adoption, Mr. Chairman.

The motion was seconded and unanimously carried.

The Secretary: The next resolution reads as follows:

"Whereas, The United States of America is the owner of certain oil bearing lands in the State of California and elsewhere and there are on the Pacific Coast numerous municipal corporations and other governmental agencies which in the construction of roads, in the development of power used in the operation of public utilities and related purposes, use great quantities of oil, and

Whereas, It is the sense of this body that it should be made possible for such municipal corporations and other agencies to acquire and develop such portions of said oil lands as may be necessary or convenient for the purpose of supplying oil used in such public works and the operation of such public utilities; now therefore, be it

Resolved, By the League of California Municipalities that the Secretary of the Interior be, and he is hereby, requested and urged to lend his influence and energy to the support of a proposition, by amendment to pending legislation or otherwise, to set aside for acquisition by municipal corporations and other governmental agencies, such oil lands as may be necessary or convenient for the use thereof in the construction of public works and the operation of such public utilities, and that a copy of this resolution be forwarded to the said Secretary of the Interior."

The President: Gentlemen, you have heard the reading of the resolution relative to oil lands. What is your pleasure?

Mr. Rutherford: I move the adoption of the resolution, Mr. Chairman.

The motion was seconded from the floor.

Mr. Robson: I don't quite see how that is of any particular advantage to the cities as a whole. I can't see how a municipality can take advantage of that, and I can't see how it will work out in practice, nor do I see how the oil fields can be specified. Oil, to be used by municipalities, for another matter, has to be treated. There are very few municipalities that would take advantage of what is proposed by this resolution. I think it is unnecessary.

Mr. Walsh: I think the mover of the resolution should give us some information as to why he recommends it.

The Secretary: I think there is a communication accompanying that.

The President: This communication, referred to by the Secretary, is a personal letter written by William Thury, former Mayor of Pasadena, and addressed to Mr. J. H. Howard, Palace Hotel, Visalia. He says:

"Dear Mr. Howard:

Your telegram was handed to me just as I was leaving for San Diego and am writing this on the train.

I have been expecting the return from Washington of a big oil man who is in sympathy with conserving all oil necessary for public use by keeping it in possession of the people, but now I am advised that he will not return until the end of month. From him we expect to get advice as to the best way to proceed.

All that can be done now is to try to get the passage by the League of a resolution addressed to Secretary of the Interior Franklin K. Lane, requesting him to use all his influence to have ample oil lands set aside for acquisition and operation by the Pacific Coast States and municipalities for all oil they may need for public purposes.—such as for heating, for power in the public utilities, for paving public roads and for whatever other purposes that the States and cities now purchase oil or would in future have to purchase it if no oil land were set aside for them by amendment to pending bill.

If the resolution is passed and fails to have any direct result it would still produce a good indirect result of which I

will tell you after you return. Good Luck."

What will you do with the resolution, gentlemen?

Mr. Topham: May I ask the Secretary to read the resolution again, Mr. Chairman?

(The resolution was read again by the Secretary.)

Mr. Robson: I move as a substitute. Mr. Chairman, that the resolution be laid on the table. I can't see where it is of any practical benefit to us. The oil lands are all withdrawn now for the benefit of the Navy Department, which needs it very much more than do the municipalities. I can't see, thinking the matter over, unless it be one or two cities absolutely adjacent to the oil fields, how it would benefit our municipalities. We would have to have a refinery and everything else. It is certainly not one that can be generally availed of.

The Secretary: We do not have to refine oil for use for power purposes, do we?

Mr. Robson: You can't afford to take oil as it comes from the ground and burn it. The oil you burn is not the oil that comes out of the ground directly.

The Secretary: I was misinformed, then.

Mr. Topham: I think, Mr. Chairman, we are getting into very deep water. I think more properly we should conserve the oil, and that is particularly a State function. Unless the resolution is amended so that the oil lands can be reserved for the benefit of the State, and the State could then supply the municipalities, I shall be opposed to it. I don't think this is the right idea, as it is here expressed. I think the resolution should be amended, and probably the best way to amend it would be that we ask the Secretary of the Interior to certify these oil lands for the benefit of the State of California. That is where they belong, and they should be in the hands of the State, and should have been a long while ago instead of in the hands of the exploiters of the oil fields.

I move to amend by using the words "State of California" instead of "municipalities."

Mr. Walsh: I second the motion.

The President: You have heard the

motion, which is that the resolution as proposed be amended, so that it be for the benefit of the State instead of the municipalities, as it is now set forth in the resolution. Are you ready for the question on the amendment?

(The amendment prevailed.)

The President: It is so ordered, and the resolution is amended. Are you ready for the question upon the resolution as amended—it being assumed that the Secretary will be empowered to make the necessary changes in phraseology to accomplish the purpose, if it be your pleasure.

(The resolution as amended carried.)

The President: The Secretary will read the next resolution.

The Secretary: (Reading) "Resolved, That the League of California Municipalities indorse the proposed \$15,000,000 bond issue for further highway construction.

Resolved further, That it is the sense of the League that those portions of the highway running through municipalities should be constructed out of State funds, and that the cities and towns which have already constructed a portion of the highway at their own expense should be reimbursed by the State."

The Secretary: That has been adopted by the Section of City Attorneys.

A Delegate: Has any one figured out what would become of the \$15,000,000 if they reimbursed the cities and counties for their outlay? Would there be anything left to finish the construction of the highways? It would take an enormous sum, it would seem to me, to so reimburse them.

Mr. Robson: There is another phase of the question, too, that I think at least 50 per cent of these cities that have already constructed highways through their boundaries have assessed the property owners to pay for it. You can't very well pay back every property owner. I think we are just simply getting ourselves into difficulty, by the passage of any such resolution. It is something that can't be done. The property owner, as I say, has been assessed, and the property may have changed hands two or three times. You can't very well reimburse the original property owner, and you can't reimburse the present

property owner, and you cannot reimburse the property owner who may have been in between the original owner and the present owner. I don't think the resolution is in proper form, and I move that it be laid on the table.

Mr. Topham: I move to amend by striking out the word "cities." I think the idea of putting the burden upon the city to pay for the highway within its borders is highly proper.

Mr. Handley: This whole matter is in confusion, I think, where it cannot be voted on at all. There is one thing I think we do not want to overlook. I should have supported the resolution as read, although I do not believe it is a practicable resolution—I would have supported it, however, because of its endorsement of the \$15,000,000 bond issue. I think the chance of getting that through is very important, and I might be willing to take it all, but it strikes me that now we are getting it all tangled up. I move as a substitute for the whole that we endorse the \$15,000,000 bond issue.

Mr. Robson: We have already done that, and this is another issue.

Mr. Handley: I was not in the room. If this is the case, I second the motion to table this.

Mr. Robson: A motion to lay on the table is not debatable, and I call for the motion.

Mr. Handley: I want to say that I recognize the difficulties of some of the smaller communities of the State, and I don't desire to hinder them in any procedure they might take in the matter. But I do not believe this League ought to be going into everything of that kind, that will ultimately, in my judgment, injure its influence on other matters. These problems should be worked out in the counties in which these communities are located.

Mr. Topham: I hate to interrupt my friend Handley, but a motion to lay on table is not debatable.

Mr. Handley: I was just getting one over, you see.

Mr. Walsh: I don't like the idea, Mr. Chairman, of laying it on the table. Would it not have the same effect if the subject-matter of the resolution was referred to the incoming officers?

Mr. Topham: A motion to lay on the

table is not debatable, and we ought to have a vote on it.

Mr. Walsh: I rise to a point of information from the Chairman. I am merely asking if such action would not have the same effect, as I do not like the proposition of laying it on the table. It is, in my opinion, just slapping the other fellow in the face, who ever introduced it.

(The motion to lay the resolution on the table carried.)

The Secretary: The City Planning Commission presents a report of the resolutions adopted by that body. It does not call for any particular action so far as this convention is concerned, but they will be placed on file and probably have already been given to the press, and we will publish them in our proceedings.

The President: Here are three resolutions that have come from the Department of Health, and they have been approved by the Committee on Resolutions of the League. I will ask the Secretary to read them.

The Secretary: The first of these is as follows:

"Resolved, That it is the sense of the Department of Health of the League of California Municipalities that Section 4225 of the Political Code be amended to permit the Board of Supervisors of any County to appoint for any unincorporated territory within such county a health officer who shall be under the supervision of the county health officer, and to fix his compensation."

The President: These will be read for the information of the general body. If the general body desires to adopt these as coming from the Health Section, we can take that action.

Mr. Handley: I move the adoption of the resolution read.

The motion was seconded and carried unanimously.

The President: Will you read the next one of those resolutions from the Department of Health?

The Secretary: Yes. It reads:

"Whereas, The allotment of State School Funds is apportioned on the average daily attendance, and

"Whereas, There is a disposition on

the part of local school authorities to allow children, suffering from minor communicable diseases, to continue in school in order to avoid loss of State school funds, owing to the lowered average daily attendance; therefore be it

“Resolved, by Annual Conference of the Department of Public Health of the League of California Municipalities, that the State Board of Education be requested to take steps to secure the passage of legislation allowing the exclusion of children by State or local health authorities without consequent financial loss to the school, provided that this period of exemption from loss shall not exceed 30 school days, for any one child in any one half-year.”

The President: What is your pleasure regarding this resolution, gentlemen?

Mr. Rutherford: I move the adoption of the resolution, because I believe that is the best rule yet adopted.

The motion was seconded from the floor.

Mr. Robson: The resolution does not say that they shall be paid when they are kept out of school by reason of sickness, if I have understood its reading.

The Secretary: It reads as follows: (Again reading resolution.) In other words, under the present system, the absence from school results in a diminution of the school fund.

Mr. Robson: I won't object to the resolution if it clearly covers the proposition when the pupil is away from school and because he is sick, and a reputable physician so testifies.

The President: I think that is probably covered by the preamble there.

The Secretary: It says “when suffering from minor communicable diseases,” and also says that it relates to exclusion of children by the local or State health authorities.

The question was called for from the floor and the motion passed unanimously.

The Secretary: The other one of the resolutions coming from the Department of Health is as follows:

“Resolved, That the Department of Public Health of the League of Cali-

fornia Municipalities at the annual convention held in Visalia, recommends the passage of two State Acts; one providing for the formation of six State Health Districts under the State Board of Health with the appointment of State District Health officers and State Sanitary Inspectors; and the other enabling municipalities to combine with each other and intervening and surrounding territory into local health districts for the purpose of maintaining efficient health administrations under the direction of whole-time health officers.”

Mr. Robson: I move the adoption of the resolution.

The motion was seconded and prevailed unanimously.

The President: I think the Secretary has some further resolutions that have been approved by the Committee on Resolutions. Will you read them, Mr. Secretary?

The Secretary: The first one is:

“Whereas, It is the belief that the price of cement is excessive and the cost of public improvement is being enhanced to the point of arresting construction work; therefore,

“Resolved, That the Executive Committee of this League be instructed to institute an inquiry for the purpose of presenting all the facts relating to the cost of production of cement and the factors controlling the price of same, and in the event that the conclusions reached warrant remedial measures to initiate such action as in the judgment of the Committee may be appropriate.”

The President: Gentlemen, what will you do with the recommendation of the Committee on Resolutions?

Mr. Handley: I move the adoption of the resolution.

Mr. Walsh: I second the motion.

The motion prevailed unanimously.

The Secretary: The following resolution is supplemental to the resolution first adopted, and the purpose of it is to be a little more expressive as to the particular individuals who have favored this convention during the past week. It reads as follows:

“Resolved, That this convention express its sincere thanks for, and fullest appreciation of the hospitality dis-

played by the people of Visalia on the occasion of this convention, and in this connection wish to mention especially the services rendered by the following:

"The 'Daily Times' and 'Delta' for their full, fair and favorable reports of the proceedings of the convention published by them.

"The Visalia Board of Trade and Mr. J. T. Boyer, its efficient and accommodating Secretary, and to Mrs. Boyer who did so much to insure the comfort of the delegates.

"The Tulare County Board of Trade and Mr. A. E. Miot, its enterprising Secretary.

"W. H. Thompson and W. R. Spalding for the generous donation of theatre privileges, and the Order of Moose, Elks, and other organizations for the use of their halls.

"Mr. L. C. Locey for favors extended.

"Mayor Askin and other city officials of Visalia for their many attentions.

"A. R. Orr and his most estimable wife for so much that words cannot give suitable expression.

"So many others have given us such kindly attention that we will ever cherish our week's entertainment in fondest remembrance."

The President: What will you do with this resolution, gentlemen?

Mr. Walsh: I move its adoption, Mr. Chairman.

Mr. Rutherford: I second the motion and suggest that the motion be taken by rising vote.

The President: A very good suggestion. All in favor of adopting this resolution will rise. It seems to be unanimously carried.

Mr. Handley: Mr. Chairman, I noted the Secretary passed by the resolutions from the City Planning Conference. As I understand it, those resolutions were all approved by our Resolutions Committee, and I think, therefore, we should consider them, and especially that some of them should be brought before this body.

The Secretary: That seems to be so. I noted there were quite a number of them and the preamble simply stated

that the City Planning Conference had adopted the resolutions.

Mr. Rutherford: Mr. President, there was a resolution adopted by the City Attorneys' Department, referring to the expenditure of moneys from the general county fund for the improvement of roads. Has that come to the attention of this body?

The Secretary: It has not been presented at the desk, Mr. Rutherford.

Mr. Boynton: That resolution never reached the Committee's hands, Mr. Chairman.

Mr. Rutherford: I would suggest that a resolution to the effect that the cities of the League of California Municipalities request the Legislature to pass such legislation that the Boards of Supervisors of the several counties of the State may be limited in their power to take money raised for municipalities for general county purposes, and expend that money on the improvement of roads located outside the municipalities.

The motion was seconded from the floor.

The President: You have heard the motion, gentlemen. What is your pleasure?

Mr. Topham. It seems to me that would be putting the cart before the horse, Mr. Chairman. I think we ought to have legislation which would permit the County Boards of Supervisors to expend the money which is collected in municipalities on the roads which are within it and which connect with the county. In the city of Los Angeles, we have three or four main highways which lead out of the county, and our Supervisors would gladly spend the money on those roads, but the law will not permit them to do it. I think they should be given the right to spend the money on roads inside which are not county highways.

Mr. Robson: Mr. Chairman, they all have that power.

Mr. Handley: May we have the motion stated again, Mr. Chairman?

Mr. Rutherford: The fact is that there is the general county tax which can be expended by the Board of Supervisors on roads, the law providing that the general county road tax shall

be limited to 40 cents, and in addition to the 40 cents they take money out of the general fund that is raised on all the property in the county, including the property in municipalities, and expend that, and it is as high as 25 cents on the dollar, expended on the county roads.

Mr. McConaughy: Being one of the Committee which presented the resolution to the City Attorneys' body, Mr. Chairman, perhaps I might say that the purpose of the resolution is this: Probably it does not affect Los Angeles, but it does my community. The point which we want to cure is that, take it in Mendocino County, we find that the inside rate is \$1.75. Aside from that, there are two school taxes, a primary and a Union High School tax, which brings our county rate up to \$2.25 per hundred. This year we succeeded in reducing our tax 15 cents. The County, in fixing the tax rate, levied the whole amount allowed by law for road purposes, but in addition to that, they levied a general tax, presumably for governmental purposes, of 20 cents on the hundred dollars more than is really necessary, with the idea in view of using that 20 cents for road purposes, transferring it from the general fund to the road fund when the time comes that they need it. That is the evil which the City Attorneys seek to correct. What object can there be in a municipality trying to reduce its taxes when the county will come in and assess us and tax us for something which is absolutely of no benefit to us? We have enough taxes to pay now. I find, upon examination, in my county, that the maximum rate paid in any school district outside is about \$2.75 as against in the neighborhood of \$3.25 to \$3.75 in the municipalities located in the county. We object to being taxed for something for which the money is not going to be used. And we venture to state that, in every county in the State, with probably a few exceptions, that the Board of Supervisors, at the time they make the levy deliberately add to the county tax anywhere from 10 per cent to 25 per cent for general governmental purposes, knowing at the

time the levy is made that it will be used for road purposes. I repeat that that is the evil we seek to cure. The resolution, in other words, seeks to prevent them, by proper legislation, from indiscriminately transferring money from the general fund to the road fund. We have no objection, in cases of urgent necessity, where unforeseen conditions arise, such as wash-outs, and so on, to using the general fund for such purposes. But we insist that it only be at those times.

Mr. Handley: The gentleman from Fort Bragg is in error about Los Angeles. Los Angeles City pays 75 per cent of the total county tax, and in voting bonds for good roads we pay 70 per cent of those bonds now. I think he is attacking a problem that is genuine. I think the Supervisors ought to be somehow limited in their power to indiscriminately levy taxes that affect the municipalities, for the building of roads and other improvements outside of the city limits. But I can see that this is a very dangerous limitation to put upon them, and it should be very carefully drawn, so as not to tie the Supervisors' hands at such a time as he suggested, namely, in case of emergency, because there are occasions where we cannot begin to draw municipal and county lines. But in our county, the process of building roads and furnishing material therefor amount to something like 80 to 100 miles a year, and 70 per cent of that money comes out of the City of Los Angeles. But I only rose to suggest that often, in our zeal to correct a wrong that exists, we create an additional wrong, which in this case is that we may handicap the governing powers of the county in cases where it would be necessary to act.

Mr. Robson: It seems to me, Mr. Chairman, that we are all losing sight of the fact that a good road in a county is of more benefit, in the last analysis, to the city than it is to the county. Because all roads lead to the cities, and the only way a city can exist is by the building up of the back country. And I think that, finally considered, you can't build the road any other way. I know the purpose of the tax is as

stated by the gentleman here, but if you limit the taxes to what the outside district can pay, you cannot build the right kind of roads, and the people in your county cannot come to your city to do business, and you can't go out of your city into the surrounding country. Exactly the same thing applies to the State Highway system. The cities are paying for that almost exclusively. Probably the large cities pay indirectly 75 per cent of the cost of the State Highway, just the same as the cities in a county pay 75 per cent of the cost of a county highway. It is the only way it can be done.

Mr. Brock: It seems to me the attorney at Fort Bragg has overlooked the proposition that the law is pretty well safeguarded now. It prescribes that you can take a certain fixed sum, and if the matter is properly watched, the safeguard is all that is essential. The Supervisors have to have some leeway outside of the 40 cents, else the counties would be in a very deplorable condition so far as their roads are concerned. At the present time, the 40 cents hardly takes care of the actual maintenance, and there has to be some method of doing permanent work on the permanent roads, and the method suggested is now the only way the Supervisors have of getting that help. I, for one, will oppose the adoption of the resolution.

Mr. Armstrong, of Hayward: I am opposed to the adoption of the resolution, for this reason: The cost of county roads has been brought about by the use of the automobile. It is true that in some communities 90 per cent of the automobiles are used and operated by residents of the cities. Why not have them pay part of the cost of the construction of the county roads? Take it in the neighborhood of Alameda County; our roads there have been built out of county money from the general fund, and probably 75 per cent of the use of those roads is by the residents of the cities, Oakland, San Leandro, Hayward, Alameda, Berkeley, and the other cities of the county. I am opposed to it.

Mr. Brock: In our particular town and county, it is the residents of the city that are to blame much more than the Supervisors. We go down to the county seat in a body every other Monday morning, and if we are not there another bunch is there from some particular place, asking the Supervisors to build certain roads. We have a lot of mountain roads, and that is the only way we have got them built. We need them badly, and they are worth all they cost. So far as San Bernardino is concerned, we have used the money that way, but it is all for the benefit of the people of the county. I think it is a good thing.

The question was called for from the floor, and on being put to vote, the motion to adopt was lost.

The President: What further is there, Mr. Secretary?

The Secretary: I see that, as suggested, the report presented by the City Planning Conference has the O. K. of the members of the Committee on Resolutions of the League generally, and therefore we should act upon them, of course. I will read the first one:

"Whereas, The work and the objects, purposes and aims of the State Housing Institute has been brought to the attention of the League by Mark C. Cohn, Executive Secretary of the said Institute, an organization comprised of the 14 largest cities of the State, who were invited by the Commission of Immigration and Housing of California to participate in a series of conferences for the purposes of studying and discussing all phases of the housing problems and to formulate practicable, reasonable and uniform legislation regulating the construction and maintenance of tenement, hotel, lodging and single and multiple dwelling house buildings, to present to the next Legislature for enactment into law, and

"Whereas, It appears that the method of procedure of this organization is progressive, and that the nature of its work is necessary and will be beneficial not only to every municipality and to the officials of the various cities but to all classes of people who live in these buildings; therefore, be it

"Resolved. That the League of California Municipalities in regular session assembled at the 19th Annual Convention in the city of Visalia, California, does hereby endorse the work of the said State Housing Institute, and the objects, purposes and aims of its work, and further urges all delegates to co-operate with the said Housing Institute to the end that the best trained minds in the State join in giving California the best set of housing laws of any State in the Union, and be it further

"Resolved. That the League does hereby pledge its support and co-operation to the end that such report or bills as result from the work of these experts are enacted into law by the next Legislature."

The President: You have heard the reading of the resolution. What is your pleasure?

Mr. Robson: Mr. Chairman, while I presume it is all perfectly right and proper, I don't think the Convention should be asked to endorse a paper which it did not hear read. I would hesitate, therefore, to vote our endorsement of something that I do not know just what I am voting for. It is rather strange to ask us to endorse something we know nothing about.

Mr. Handley: The gentleman is in the same boat I was a little while ago, Mr. Chairman. The paper in question was presented here the first day, setting forth exactly what it is, and it is purely a matter of getting the best housing rules which we can, and this Institute of the State has been working on that. Therefore, I move the adoption of the resolution, and urge that it be endorsed by this body.

Mr. Walsh: I second the motion on the report of the Committee.

The President: Mr. Cohn's paper was read at the first day's session and some of those who were attending the meetings of the Sections and Departments may not have heard the discussion.

The question was called for from the floor and the resolution was unanimously adopted.

The Secretary: The next resolution

adopted by the City Planning Conference is as follows:

"Whereas. It appears that the best public interests will be subserved if Cities be enabled to enact laws or ordinances when in their discretion public convenience so demands restricting the erection of buildings in accordance to their use; therefore be it

"Resolved. That the League of California Municipalities in regular session assembled at the 19th Annual Convention respectfully petitions the Legislature of California to enact a law authorizing Cities to enact laws or ordinances restricting portions of the Cities wherein only residences may be erected and prohibiting the erection of tenements, hotels, lodging houses or flats or any building proposed to be used for any purpose other than private dwelling houses, as well as restricting the erection of dwelling houses in certain districts."

Mr. Handley: I move the adoption of the resolution.

A Delegate: I second the motion. I think we ought to petition the Legislature to enact a law curtailing the power of Supervisors, especially in adopting a map where the lots are less than 50 feet frontage. We find some of these real estate men will cut down a lot to 23 feet, and then when you discover you have only 23 feet, the result is that you have got to put up a small house, and you have to put in right up against your neighbor's house.

The Secretary: This resolution calls for an act by the Legislature to enable municipalities to pass ordinances.

Mr. Walsh: It is an enabling act?

The Secretary: Yes.

The motion was put and the resolution carried unanimously.

The Secretary: The next resolution is:

"Whereas. It appears that the best public interests will be subserved if Cities be authorized to establish building set back lines; therefore be it

"Resolved. That the League of California Municipalities in regular session assembled at the 19th Annual Convention respectfully petition the next Cali-

fornia Legislature to enact a law authorizing Cities to enact laws or ordinances establishing building set back lines."

Mr. Walsh: I move the adoption of the resolution, Mr. Chairman.

The motion was seconded, and the resolution carried unanimously.

The Secretary: The next resolution proposed is as follows:

"Whereas, City Planning is one of the most important matters now before the Cities of the State in order not only to prevent evils which are sure to come as the Cities grow in population; but also to correct existing conditions, and

"Whereas, Cities may, especially the smaller cities desire the assistance of expert advice, and that they should be able to receive help of experts when so desired; therefore be it

"Resolved, That the League of California Municipalities in regular session assembled at the 19th Annual Convention does hereby respectfully petition the next California Legislature to establish a Bureau of City Planning in the Commission of Immigration and Housing of California in co-operation with the Extension Division of the University of California and appropriate a sum of \$12,000.00 for its maintenance."

The President: What will you do with this resolution, gentlemen?

Mr. Handley: I move its adoption, Mr. Chairman.

The motion was seconded, and the resolution passed unanimously.

The Secretary: The next resolution is as follows:

"Resolved, That the League of California Municipalities in regular session assembled at the 19th Annual Convention petitions the California Legislature to enact legislation authorizing the State Railroad Commission to order Union Stations or Depots to be used jointly when convenience so demands."

The President: Gentlemen, you have heard the reading of the resolution. What is your pleasure?

Mr. Topham: The Public Utilities Act states that the Railroad Commission has that power already.

A Delegate: I move its adoption,

Mr. President—double power is not going to hurt anything.

The motion was seconded, and the resolution carried unanimously.

The Secretary: The last of the resolutions proposed by the City Planning Conference reads as follows:

"Resolved, That the League of California Municipalities in regular session assembled at the 19th Annual Convention respectfully petitions the Legislature of California to place on the ballot at the next general election the proposition of an amendment to the State Constitution providing for public acquisition of real property by the method otherwise known as excess condemnation."

The President: What will you do with this resolution, gentlemen?

Mr. Robson: I move its adoption, Mr. Chairman.

The motion was seconded and the resolution unanimously carried.

The President: I believe that concludes the list of resolutions.

Mr. Marceau, of Stockton: There is one other matter taken up in the City Attorneys' branch that I think we should consider here. That is the matter of the necessity for certain members of the Legislative Committee being in attendance at the coming session of the Legislature, to watch as to the legislation being enacted, and with the particular idea, so far as the City Attorneys are concerned, of keeping them from undue tinkering with the street law. As Mr. Mansfield, the President of the City Attorneys' branch, and Mr. Locke are both absent, I thought I would call the matter to your attention. It will be necessary for certain members of the Legislative Committee to be in attendance at the Legislature a greater portion of the session. It is enough of a sacrifice to our members who attend to give up their business and be in attendance, and therefore it is our thought that it is no more than just for the League of Municipalities to pay the actual railroad fare and hotel expenses of the members of the Legislative Committee in attendance at a Legislative session, and our further

thought was, if there be not sufficient funds in the League's treasury at the present time, that the cities composing the League would contribute, and that an assessment might be levied for that purpose. We consider it is an absolute necessity for certain members to be in attendance there to watch the laws as they are put through in passage. I know the 1911 Street Improvement Act, the bond feature of it, was rendered doubtful merely by reason of the fact that somebody dealing with the act who did not thoroughly understand it, without consulting the branch of the League of Municipalities, added the feature. For that purpose, I now move that the League of California Municipalities pay the actual expenses of members of the Legislative Committee while in attendance upon the Legislature.

The motion was seconded from the floor.

The President: It has been moved and seconded that the League pay the actual transportation and hotel bills incident to attendance at the Legislative session upon matters of street law and other matters of interest to our municipalities being considered. I think that is, in any event, the purport of the motion.

The question was called for from the floor and the motion prevailed unanimously.

The President: We will now pass to the next order of business, which is the report of Departments. I understand that the Department of City Attorneys has a report. The Department of Clerks, Auditors and Assessors have already handed up theirs, showing the election of the following officers:

President, Frank Kasson, of Palo Alto.

Vice-President, C. O. Boynton, Auditor of Long Beach.

Secretary, Elma F. Early, City Clerk of San Mateo.

EXECUTIVE COMMITTEE.

Frank C. Merritt, Chief Deputy Clerk of Oakland.

H. B. Snyder, City Clerk of Santa Rosa.

Ida Trubschenck, Town Clerk of Sunnyvale.

W. C. MacAdams, Assessor of Visalia.

H. Z. Waughop, City Clerk of Long Beach.

If there is no objection, the report will be filed. We would like to have the list of officers from the Engineers, Superintendents of Streets and Councilmen, and also from the Department of Attorneys, if they are here.

Mr. Robson: I can report, Mr. Chairman, for the Department of Engineers, Street Superintendents and Councilmen, that we elected Mr. H. B. Lynch, of Glendale, President, and, with the thought in mind that it would be better to have the other officers within a reasonable distance of the President, we left it to the President to select the other officers of the Section.

The President: If there is no objection, that report will take the same course. Is the Department of City Attorneys ready to give its list of officers?

Mr. McConaughy: Mr. Locke has the complete minutes. Mr. President, and if the matter can be passed, the officers can be printed in the record.

The President: Very well. Are there any reports from other Departments to be heard? If not, the next order of business is the selection of the place for holding the next Convention of the League. Before reaching that order of business, let me remind you that the citizens of Visalia have invited the delegates and their families to take an automobile ride this afternoon, evidencing again their hospitality.

We will now proceed to the selection of the next place of meeting, and the orators will be given time to present the names of their favorite cities. I want to say that I have received a telegram placing the City of Santa Ana in nomination. Nominations are now in order.

City Attorney A. H. Winder, of Riverside, placed the City of Riverside in nomination.

Dr. J. H. Shaw, Health Officer of Sonoma County, placed the City of Santa Rosa in nomination, and the

nomination of that city was seconded by City Clerk Herbert B. Snyder.

Former President of the League, S. C. Evans, of Riverside, seconded the nomination of the City of Riverside.

Lorin A. Handley, of the Board of Public Works of Los Angeles, placed the City of San Diego in nomination.

Dr. William Simpson, Health Officer of Santa Clara County, placed the City of San Jose in nomination, which nomination was seconded by City Manager Thos. H. Reed, of San Jose.

City Attorney Wallace Rutherford, of Napa, seconded the nomination of Santa Rosa, and the nomination was also seconded by Commissioner F. T. Robson, of Berkeley.

On motion of Mr. Handley, carried unanimously, the two lowest cities in the balloting were agreed to be dropped upon the first roll-call, and the lowest one upon each roll-call thereafter.

The President: If there are no further nominations, we will now proceed to ballot. Seven cities have been placed in nomination, either from the floor, or by invitation of their governmental bodies, and other public bodies. These cities are: Riverside, San Diego, Santa Rosa, Santa Cruz, Del Monte, San Jose, and Santa Ana. The Secretary will act as teller.

On the first ballot, the vote stood: Santa Rosa, 23; Riverside, 11; San Diego, 7; and San Jose, 5.

When the City of San Jose was reached in the roll-call, City Manager Reed cast the vote of that city for Santa Rosa, and asked those who had voted for San Jose to follow him in that respect. Thereupon the cities of Richmond, Monterey, Watsonville, and Rio Vista changed their vote from San Jose to Santa Rosa.

Mr. A. H. Winder, of Riverside: Mr. President, may I make a motion before the vote is announced?

The President: You have the floor.

Mr. Winder: I move that the Secretary of this League be instructed to cast the unanimous vote of this Convention for Santa Rosa as the place for holding the next Convention, and when we are

there Riverside will bid for it the following year.

Mr. Handley: On behalf of the City of San Diego, and the City of Los Angeles, and the southern part of the State generally, I second the motion.

City Attorney Paul C. Morf, of Oakland: In that connection I desire to say that the City of Oakland instructed its delegates to vote for San Diego, and we have no power to change, and therefore we want to be noted as voting "No" upon the motion.

(The motion was put and carried.)

The President: Santa Rosa is declared as the Convention City for the year 1917. (Applause.)

The next order of business is the election of officers for the ensuing year.

Mr. Snyder: In the name of Santa Rosa, Mr. Chairman, before you pass that order of business, I thank you all for conferring the honor that you have upon our city. We will endeavor to keep good the reputation that our city has by way of entertainment.

The President: Nominations are now in order for the office of President of the League for the ensuing year.

City Attorney J. W. Coleberd, of South San Francisco: Mr. President, I nominate for the office of President of this League, Mr. Wallace Rutherford, of Napa.

Mr. Orr: I take great pleasure, Mr. Chairman, in seconding that nomination.

The President: Are there any other nominations for the office of President?

Mr. Robson: I move that the nominations be closed, and that the Secretary cast the ballot of the Convention for Wallace Rutherford for President.

The motion was seconded and prevailed unanimously.

The President: I declare Mr. Wallace Rutherford of Napa, your duly elected President, and I will ask Mr. Orr to escort him to the platform. (Applause.) We will proceed with the election, and we will greet all of our newly elected officers upon their installation in a few moments. Next in

order will be nominations for the office of First Vice-President.

Mr. Topham: Mr. President, it gives me very great pleasure to place in nomination for the office of First Vice-President the gentleman who has been our Second Vice-President during the past year, and who will, I know, be very successful in the higher position, Mr. Lorin A. Handley, of Los Angeles.

Mr. John O. Walsh, of San Francisco: I second the nomination. Mr. President.

Mr. Robson: I move that the nominations close. Mr. Chairman, and that the Secretary cast the ballot for Mr. Handley.

Mr. Walsh: I second that motion.

The motion prevailed, and the Secretary cast the ballot of the Association for Lorin A. Handley.

The President: I declare Mr. Lorin A. Handley, of Los Angeles, your duly elected First Vice-President, and will ask Mr. Robson to escort him to the platform. (Applause.) Nominations for the office of Second Vice-President of the League are now in order.

Mr. Topham: Mr. President, no one seems to move in this matter, and so I will again take my feet and say that the Department of Engineers, Street Superintendents, and Councilmen has had for its presiding officer this year a very excellent presiding officer in the person of Mr. Robson, of Berkeley. I believe he will make a good Second Vice-President of this League, and I place him in nomination for the office.

Mr. Snyder: I second the nomination, Mr. President, and that the nominations do close and that the Secretary be instructed to cast the ballot of the Convention for Mr. Robson as Second Vice-President.

Both motions prevailed, and the Secretary cast the ballot, and Mr. Robson was declared the duly elected Second Vice-President for the coming year.

The President: I will ask Mr. Topham to escort Mr. Robson to the platform. (Applause.) The next in order is the election of a Secretary. Nominations are in order for Secretary of the League.

A Delegate: I suppose we can nomi-

nate two gentlemen as general secretaries of the League?

Mr. Kirkbride: In order to be strictly within our By-Laws, they require the nomination of a Secretary.

Mr. Mason: In that connection there was a motion made last year similar to this, and it prevailed. But, in order to straighten out things, the Executive Committee, which has the naming of the Executive Secretary, perhaps, for one of the Secretaries, thought it best to call that officer Executive Secretary. There was no formal change made in the By-Laws. I thought it would be a graceful compliment, and it was something I wanted to announce, after your choice for Secretary was made known, to ask this Convention to confirm the appointment of Mr. Locke as Executive Secretary. In that connection, I want to pay him a very high tribute. He has been very faithful in the performance of his duties, and I have congratulated myself on many, many occasions that I had the wisdom, or whatever it was, to select him to assist in the conduct of the Secretary's office. I wanted also to announce, in the event that you confirmed that selection, that I would give notice of an application to the Executive Committee to increase his salary. I think it may be well, however, to separate the two positions. That, of course, rests with the judgment of the Convention.

The President: Since the question has been raised by Mr. Kirkbride of the Department of City Attorneys, perhaps it would be better to proceed now to the election of a Secretary.

A Delegate: I nominate Mr. Mason.

The President: If there is no objection, then, the President will so rule, that the nomination of Mr. Mason has been made for Secretary of the League for the ensuing year.

Mr. Topham: I move that the nominations close, and that the President cast the ballot of the Convention for H. A. Mason for the office of Secretary.

The motion prevailed unanimously.

The President: It gives me pleasure to say that the ballot has been cast for

Mr. H. A. Mason as Secretary for the ensuing year.

The Secretary: I thank you, gentlemen, for the compliment. And, as previously stated, I wish to announce the appointment of Mr. W. J. Locke as Executive Secretary, and I ask this body to confirm that appointment, so you will have a voice in selecting who shall be the executive officer of this League.

Mr. Rutherford: Mr. President, I would like to make the motion that Mr. Locke's appointment as Executive Secretary be confirmed, and that his salary be fixed at the sum of \$150 per month.

The motion was seconded and carried unanimously.

Mr. Kirkbride: In the carrying of that motion, I think we should congratulate ourselves upon the financial condition of this League. It has been one of those successful institutions, and always has been able to pay its bills, usually coming out with a balance in the treasury. This year we face the coming year in the same successful condition. And I think the attention of all of the members of the League should once more be focused upon the fact that we have declared a good dividend in the shape of the handbook that has been distributed to the cities gratuitously, the expense of which has been paid out of the League treasury.

The President: The members of the Convention will take note. I believe there has been so far no report from the Auditing Committee on the Treasurer's books. This matter was referred to the Department of Clerks, Auditors and Assessors on the opening day of the Convention. Is there any formal report, Mr. Kasson, to be made in that respect?

Mr. Kasson: We have examined the books, and we find them in proper shape, and find the balance correct in accordance with vouchers which the Secretary has presented.

The President: The Committee on Audit of the Treasurer's books declares the audit of the books shows them to be correct.

It now becomes my pleasure to turn

the insignia of office over to our newly elected President, Mr. Rutherford. I will place in his hands this gavel of authority, with which he may rule over you during the remainder of the session. (Applause.)

President Rutherford: Gentlemen of the Convention: I want to express my appreciation for the honor which you have seen fit to bestow upon me. Of course, it came as a great surprise.

The League of California Municipalities has come to occupy a prominent position in the affairs of the State of California. Indeed, for a great many years, it has occupied such a position. It will only be two years hence when it will have reached its stated majority, twenty-one years. During its life, marked by the nineteen annual conventions which it has held, it has not only taken a place in the State of California as a body worthy of consideration, but it is recognized throughout the whole United States as an institution proficient in all of its details, whose accomplishments are worth following by leagues in other States. As your President during the coming year, I shall endeavor to uphold the prestige of the League, and, with the efficient help of our Secretary and Executive Secretary, if possible bring it into yet greater prominence, and see to it that it shall occupy a better and stronger position in the community in which we live.

I shall be brief at this time, closing as I opened by again expressing my thanks to you for your confidence in me. (Applause.)

President Wright: I know, gentlemen, that you will want to have a few words from your new First Vice-President, Mr. Lorin A. Handley, of Los Angeles.

Mr. Handley: Mr. President, and gentlemen: You may be sure I appreciate the honor you have done me. You have been so patient with me, however, that I am not going to take up a great deal of your time at this point. But may I urge upon you that you assist the President and the Executive Committee to make this the best year of

the League's history? I think we are getting a greater vision of the possibilities of municipal government. And, as we go through the year, looking to our meeting again at Santa Rosa, let us make it a step in advance over the past year. For my part, notwithstanding Santa Rosa is a little further away, than either San Diego or Riverside, we are going to try to have the largest delegation from the southern part of the State that Los Angeles has ever had in the Convention. What I particularly want to say is this: All these cities that are not represented in this Convention, I am sure will be represented a year hence, if you will but speak a word to some official who has the proper responsibility, and lay it upon that official in the proper way. We are certainly going to attempt to do that in the southern part of the State, and we are the farthest away from the meeting point. So that if you people throughout the middle and northern sections of the State don't look out, we will have a bigger delegation from the southern cities than you have from closer by. But let us make the next Convention the best we have ever had. I thank you. (Applause.)

President Wright: In your selection of your President and Vice-Presidents today, you have taken the three sections of the State, the northern, the central and the southern. We will now have a word from Second Vice-President, Mr. F. T. Robson, of Berkeley.

Mr. Robson: I want to thank you all very, very sincerely. I need not say that the action was entirely and absolutely unexpected. Indeed, I was asked to make a nomination myself this morning, and your act in making me your second Vice-President is such a surprise that I have not recovered. But let me assure you that you will have my best and most earnest efforts during the year and at all times. (Applause.)

President Rutherford thereupon assumed the chair.

The President: I have one thing further I would like to see this Convention do. Yesterday, in anticipation of the events of today, I asked Mr. Locke for a

copy of the By-Laws of the League, and its Constitution, and was informed by him that we are doing some things not authorized by our Constitution and By-Laws. For instance, we have an Executive Secretary, an office not provided for by the By-Laws. It does seem to me that the League of California Municipalities, preaching, as it does, model charters, model institutions, model city governments, ought to have a model Constitution and By-Laws of its own, a Constitution and By-Laws that it will not have to apologize for when we send a copy to the Eastern States, as Mr. Locke yesterday informed me he had recently to do. I would be very glad to entertain a motion that the revision of the Constitution and By-Laws of the League be placed in the hands of the Executive Committee for the purpose of having that Committee report at the next Convention of the League.

Mr. Wright: Mr. President, I make a motion in the words of Mr. Rutherford.

The motion was seconded, and carried unanimously.

The President: This Convention has been presided over during its deliberations here by the City Clerk of San Diego, Mr. Wright, in a manner that commends itself to each and every member of this Convention. I believe that we owe it to Mr. Wright to extend to him the thanks of the Convention for the able manner in which he has presided over its deliberations. I would suggest that, therefore, in appreciation of the services he has rendered during his year of office, and the signal ability with which he has presided over us, that we all rise, in that manner expressing to him our deep appreciation of his labors.

A unanimous rising vote was the response to the suggestion of the President.

Mr. Wright: I am certainly grateful for this cordial expression of your good will, Mr. President and gentlemen. It has been a privilege to me to preside over the deliberations of this League, and I have felt it a distinct honor. And you may be sure that, during the coming years, any advice or suggestion I can give, which I think may, perhaps, be of

benefit to the League, or to its officers, will be most freely given. Again I thank you. (Applause.)

The President: Now, gentlemen, our labors are over. We thank you for your attendance at this Convention. We know that we have accomplished good work.

We know that through the work that has been done we shall accomplish yet more, especially in the Legislature during its coming session. We now bid you goodbye, and may we see you all again at our Convention in Santa Rosa in 1917. (Applause.)

ADVANTAGES OF PREFERENTIAL VOTING

By LEWIS JEROME JOHNSON, Harvard University

The double election system in use in Des Moines, Los Angeles, Seattle, Tacoma, Lawrence, Mass., and many other cities, may elect any candidate from the best to the next to the least acceptable of the strong candidates. Of the two men selected in the primary both may be unacceptable, but the final election will reject the less acceptable of the two. It is the raw plurality system but thinly disguised by the burdensome doubling of elections.

The ordinary State primary may elect any from the best to the very least acceptable of the strong candidates. The worst candidate of any party may emerge from the primary with a plurality, and if his is the strongest of several parties, he may get the final election by a plurality. It is the old plurality system, somewhat sobered, perhaps, by partisan self-interest.

The old plurality election, without primaries, as in Boston, may elect any from the best to the least acceptable. It may deliberately be characterized as the most hazardous system of public elections known.

In all three of the foregoing cases a bad matter is made worse by the fact that the imperfections of the systems, and the burdensome nomination or campaign conditions which they involve, are great obstacles to getting the best citizens to accept a nomination.

The preferential ballot under normal conditions elects the best or one of the best of the candidates; moreover, the improved campaign conditions which go with it tend to attract good candidates into nomination. This statement, of course, presupposes the usual case in which the primary is eliminated. The

advantage of the preferential ballot over all other forms of election procedure is clear and sharp. Experience alone will teach us into how large a voting unit we may care to push it. The case for its use in large cities seems already to be made.

But even with the preferential ballot in vogue, a neglect to nominate a candidate of majority magnitude might enable an anti-majority man to win. No election procedure can be expected to be either apathy-proof or fool-proof. The best we can do is to minimize the chances for harm.

Whatever the election procedure, good publicity conditions and good initiative, referendum and recall provisions, by hedging the office about with wholesome restraints, are good supplements to any election system. They deter bad candidacies and reduce the harm if a bad candidate should slip past the election.

The chief advantages of the Bucklin system of preferential voting may be restated and summarized as follows:

1. It permits the abolition of primaries without interference with the democratic and rational method of nomination by a very small number of petitioners.

2. It permits the nomination of a large number of candidates with practical elimination of the danger of the split ticket.

3. It fosters campaign methods which greatly reduce the difficulty of getting high-grade men to stand for office. It minimizes the unattractiveness of the campaign and effectively discourages "mud-slinging"—the candidate who might otherwise descend to slander of his opponents is deterred by fear of

alienating second or other choice votes which might come his way. The competition between nominees, while keen and searching, is neither burdensome nor invidious. While it is a great honor to win, it may be no dishonor and no disappointment to lose. The best nominees may well accept nominations in the spirit of friendliest rivalry and work for the election of any one of a group of their fellow nominees quite as much as for themselves, and perhaps even more earnestly. The responsibility on any one nominee to win may become so slight that a man may accept a nomination in the midst of an absence from the State which is prolonged till after the election day and still be elected. This actually happened when the president of the Spokane Chamber of Commerce was thus elected in 1911 as one of a commission of five to a four-year term, and from a list of 92 nominees for the commission. Other results in preferential voting cities show that the voters are quick, as might be expected, to elect a better grade of officials as soon as they are brought within their reach.

4. It is believed to be the safest known means of election for protecting the majority interest against machine or special interests. It cannot, of course, insure a majority for the winning candidate—no system of voting can do so in any proper sense—but, in case no one running is widely and favorably enough known to command a majority in a free, open expression of choice, it offers a

greater likelihood than any other known procedure that the winner will be of a type loyal to the majority interest, rather than to any machine or special interest.

5. It greatly simplifies the supremely important problem of securing high-grade, nonplace-hunting, and competent elective officials. The reasons are suggested in the two preceding sections, but this advantage is important enough to warrant separate emphasis.

6. It is simple, practical, attractive to voters, and an already operative institution under widely varying American conditions.

So long as we retain primaries, they should clearly include the preferential ballot, as is already demanded in New Jersey by all three of the chief parties. In Massachusetts one already hears free predictions that the primary, even for State officials, is as doomed as it is in cities. Lack of interest in the primaries gives added force to this suggestion. Nomination by petition and the preferential ballot would seem to be as suitable for the election of a governor as of a mayor or commissioner; but the short ballot should be part of such a system in State politics as it also should be and usually is in city government.

It certainly looks as if the way to mend the primary is to end it, not as a reactionary step but further forward to a simpler, safer, and still more effective instrument of democracy—the Bucklin preferential ballot.

ELECTION BY PREFERENTIAL VOTING

American cities have for several years been seeking, through changes in the election laws, to escape the evils of election by a minority. Under the system of election by plurality an organized minority can usually win against an unorganized majority, by dividing the majority vote among two or more candidates. The system of a double election in which the first election eliminates all but the two highest has been tried with some success for a good many years. In 1909 the Berkeley charter introduced the innovation of electing at the primary those candidates who had a majority of the votes, thus correcting the injustice of compelling a candidate who had already been given a clear majority of the votes to go to the labor and expense of a second campaign. This was followed by many cities. In the same year Grand Junction, Colorado, introduced a plan intended to accomplish the same result at a single election through the expression of a first, second and third choice on the same ballot, instead of at two elections. This plan was devised by Senator

James W. Bucklin and proved so successful that it has been followed by a considerable number of cities. Other plans of preferential voting have been devised which give a more accurate expression of the will of the voters, but the recommendation of the Bucklin system is its simplicity. While it does not always insure election by a majority, it usually has this result.

The preferential system of voting, in one form and another, has shown steady progress in the past seven years, as may be seen by the following list of cities adopting it:

Date	Cities	Population in 1910
1909.....	Grand Junction, Colo.	7,754*
1910.....	Spokane, Wash.	104,402*
1911.....	Pueblo, Colo.	44,395*†
1912.....	New Iberia, La.....	7,499*†
1913.....	Duluth, Minn.	78,466*
(Declared unconstitutional by Minnesota Supreme Court, Aug. 29, 1915. See Brown v. Smallwood, 153 N. W. 953.)		
1913.....	Denver, Colo.	213,381*
1913.....	Colorado Springs, Colo.	29,078*
1913.....	Portland, Ore.	207,214*†
1913.....	Nashua, N. H.	26,005
1913.....	Cleveland, Ohio.	560,663‡
1913.....	LaGrande, Ore.	4,843†§
1913.....	St. Petersburg, Fla.	4,127
1913.....	Fort Collins, Colo.	8,210†
1913.....	Cadillac, Mich.	8,375†§
1914.....	Vineland, N. J.	5,282*
1914.....	Ridgewood, N. J.	5,416*
1914.....	Nutley, N. J.	6,009*
1914.....	Hawthorne, N. J.	3,400*
1914.....	Bordentown, N. J.....	4,250*
1914.....	Millville, N. J.	12,541*
1914.....	Long Branch, N. J.....	13,298*
1914.....	Phillipsburg, N. J.	13,903*
1914.....	Orange, N. J.	29,630*
1914.....	Atlantic City, N. J.	46,150*
1914.....	Passaic, N. J.	54,773*
1914.....	Trenton, N. J.	96,815*
1914.....	Jersey City, N. J.....	267,779*
1915.....	Hoboken, N. J.	70,324*
1915.....	Ashtabula, Ohio	18,266
1915.....	Napa, Cal.	5,791
1915.....	Santa Monica, Cal.	1,847
1913.....	Houston, Texas (adopted as adjunct to primary)....	78,800

*Commission form charter. †Restriction to one vote in the third column for each office to be filled; the provisions in this respect of LaGrande and Fort Collins are not quite clear. ‡Twenty-five hundred signatures required for nomination of mayoralty candidate. §Commission city manager plan.

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

- Animals**, requiring notice of any contagious disease, cremation of. Napa, 1408.
- Storm water conduit**, permission to construct. Oakland, 1409.
- Cemeteries**, appointing superintendent and prescribing duties of. Sacramento, 1410.
- Express wagons, etc.**, requiring owners to file weekly statements. Sacramento, 1411.
- Bread**, regulating sale of. Huntington Beach, 1412. Orange County, 1412.
- Public utility district**, special election for. Turlock, 1413.
- Grades**, changing of. Paso Robles, 1414.
- Cows**, regulating keeping of. Albany, 1415.
- Streets**, ordering closing and abandoning of certain streets. Oakland, 1416.
- Gambling**, prohibiting of certain games of. Paso Robles, 1417.
- Fortune tellers, palmists, etc.**, regulating business of. Sacramento, 1418.
- Oranges**, regulating the business of packing, selling and shipping of oranges. Fresno County, 1419.
- Automobiles for hire**, providing for the conduct of the business of. Sacramento, 1420.
- Junk dealers, pawnbrokers**, regulating business of. Sacramento, 1420.
- Franchise**, granting to erect and operate electric pole, tower and wire system. Kern County, 1421.
- Wharves**, fixing licenses upon. Redondo Beach, 1422.
- Ice**, requiring venders of to have scales. Orange County, 1423.
- Dances**, regulating certain public. San Mateo County, 1424.
- Saloons**, regulating dances in. San Mateo, 1424.
- Fire Department**, establishing a volunteer. San Bruno, 1425.
- Streets**, changing and establishing the names. Santa Maria, 1426.
- Garbage**, regulating the deposit and dumping of. San Mateo County, 1427.
- Water rates**, fixing. Sacramento, 1428. Santa Monica, 1431.
- Weeds**, providing for destruction and removal of. Sacramento, 1429.
- Liquors**, prohibiting selling within any restaurant. Anaheim, 1430.
- Harbor**, prescribing rules and regulations of the use of. Oakland, 1432.
- Tolls and wharfage**, providing for the payment of by vessels. Oakland, 1432.
- Automobiles, second hand**, requiring persons to keep record of all purchases, sales or exchanges. Oakland, 1433.
- Fire trucks**, providing protection and an unobstructed right of way on way to fire. Grass Valley, 1434. Auburn, 1434.
- Horns**, regulating use of siren horns on automobiles. Oakland, 1435.
- Franchise**, water pipes. Oakland, 1436.
- Milk**, regulating sale amending. Sacramento, 1437.
- Tax ordinance**. Inglewood, 1438.
- Foundries**, prohibiting operation within certain portions of city. Sacramento, 1439.
- Mufflers**, requiring to be kept closed. Sacramento, 1440.
- Liquors**, regulating sale of. Sacramento, 1441.
- Traffic**, regulating on streets. 1442.

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda will receive bids November 10, for one combination chemical engine and hose wagon. Bids will be received November 7 for the construction of the Lincoln School.

Arcata will shortly have a \$10,000 Post-office constructed.

Berkeley will begin the construction of storm sewers soon. Bids will be received November 3 for one tax billing machine. Board of Education received bids October 18 for one automobile five-passenger touring car.

Daly City received bids October 23 for sewer work, sidewalking and paving.

Chico is agitating a movement to build a \$50,000 addition to the State Normal School.

Coalinga will hold a \$100,000 waterworks bond election November 8.

Colusa School District will hold a \$65,000 school bond election October 18.

Folsom will shortly build a \$30,000 sewer system.

Fresno passed resolution of intention for the paving of Tulare Street. Bids were received October 16 for sewer work. Board of Education will be requested by the Parent-Teacher Association of the Lowell School to furnish drinking fountains for the school. Bids will be received November 20 for a street sweeper.

Fort Jones will hold a \$10,000 school bond election November 4.

Eagle Rock will hold a bond election November 18 to vote \$70,000 to purchase the Eagle Rock Water Company's plant.

Elsinore received bids October 23 for \$3,500 bridge bonds.

Hanford is contemplating extensive street improvements in the near future.

Hoquiam, Wash., will hold a \$175,000 bond election during November to purchase the power distributing plant of the Grays Harbor Railway & Light Company or construct a city system.

Lindsay-Strathmore Irrigation District received bids on October 21 for purchase of \$1,400,000 irrigation bonds.

Madera has passed resolution of intention for the cement sidewalking of several streets.

Martinez has set aside \$900 for improvement of the Martinez-Bay Point Road.

Marysville will receive bids for construction of \$18,000 grammar school November 2.

Modesto has voted \$135,000 for construction of a new high school.

Montague is planning for the establishment of a union high school.

Napa received bids October 30 for improving portion of Linn Street by grading and constructing concrete curbs.

Newport Beach has voted in favor of building jetty at the mouth of Newport Harbor.

Oakland may hold a \$2,000,000 school bond election.

Orland is planning a new \$10,000 high school.

Oroville. Supervisors of county are looking forward to building a new road into the mountains.

Pomona is contemplating a \$200,000 bond issue for paving.

Portland, Ore. City Engineer has complete plans for \$275,000 Tanner Creek trunk sewer.

Red Bluff is having plans prepared for a \$6,000 branch high school.

Redding. There is a movement on foot to secure a \$100,000 Postoffice building.

Redwood City received bids October 23 for constructing sewers and culverts.

Reedley is contemplating the erection of a municipal building. Fifteen miles of road grading has been completed. A fire alarm signal system has been installed and tests are very satisfactory. A \$7,000 filter bed is now being constructed at the sewer disposal works. When completed it will be the most comprehensive system in the State.

Riverside has passed resolution of intention for the construction of a sanitary sewer.

Sacramento has voted \$1,750,000 road bonds; bonds were voted by the county as a whole. Bids were received October 10 for one automobile for chief of the fire department.

San Anselmo received bids October 23 for construction of a concrete bridge over the Arroyo San Anselmo.

San Leandro is contemplating more paving work. Resolution of intention has been passed to sewer Hepburn Street.

Santa Barbara Water Commission received bids November 1 for a lot of cast iron water pipe and fittings.

Sutter Creek will receive bids November 6 for a complete covering for Main Street bridge across Sutter Creek.

Stockton received bids November 3 for construction of a 20-inch siphon crossing under Smith Canal; also for construction of concrete storm sewer and installation of a

pumping plant at the pumping station on Yosemite Lake.

Tracy. West Irrigation will shortly hold a \$195,000 bond election to construct ditches, pumping plant, etc.

Visalia is planning extensive street paving.

Watsonville will shortly construct an \$80,000 high school.

Willits received bids October 9 for repairing portion of Main Street.

CALIFORNIA COUNTIES.

Alameda County. Piedmont School District will hold an election November 7 to vote \$11,000 bonds for a school building.

Butte County received bids October 9 for construction of the Palermo-Oroville road. Ten thousand dollars' worth of road improvements have been mapped out in the vicinity of Paradise.

Contra Costa County received bids October 9 for placing oil macadam base on road in accordance with plans and specifications.

Fresno County will receive bids November 6 for 1890 barrels of Portland cement. Bids will be received November 8 for addition and remodeling of County Hospital.

Kern County will receive bids November 9 for construction of a reinforced concrete jail with cesspool at Mojave.

Madera County. Chowchilla High School will shortly hold a \$45,000 bond election.

Merced County Supervisors made an order issuing \$12,000 bonds for the Mariposa High School.

Orange County will receive bids November 9 for constructing a concrete culvert.

Santa Barbara County will receive bids November 6 for constructing a concrete bridge (arch) across Gaviota Creek.

Siskiyou County will hold an election November 4 to vote \$60,000 bonds for a school building.

Stanislaus County will hold a \$1,482,000 bond election for highways on November 7.

Sutter County will hold a bond election November 7 as follows: County Hospital, \$20,000; Nicolaus Bridge, \$165,000; Grimes Bridge, \$45,000; Live Oak Bridge, \$30,000; Long Bridge, \$60,000.

Tehama County received bids October 30 for construction of the Corning Union High School.

Tulare County will receive bids November 8 for construction of a one-story comfort station and sewerage disposal works in connection therewith. An appropriation may be asked of the government of \$130,000 for mountain road construction. Bids were received October 27 for two 30-foot reinforced concrete bridges across Deep Creek.

Ventura County received bids October 28 for paving of Casitas Bridge, La Crosse Bridge, Montalvo Bridge Extension, Saticoy Bridge Extension, Sespe Bridge and Sespe Concrete Trestle.

THE MONROE CALCULATING MACHINE



The last word in Calculating Machines and the best—the only one that performs **all** arithmetic operations and performs them all practically, rapidly and with unfailing accuracy—an Adding Machine, a Subtracting Machine, a Multiplying Machine and a Dividing Machine, all in one.

Why buy a machine that performs only one of these operations, when the same money will buy a machine which

will do all four, and do them without subterfuges, such as using complements or reciprocals?

Why buy a delicate, fragile machine, which their own makers can only guarantee for one or two years, when the same money will buy a Machine so substantial and enduring that its makers will guarantee it for five?

OFFICE, 625 MARKET STREET

DEMONSTRATIONS FREE

**ARMCO
IRON**



**DRIVEWAY
CULVERTS**



Make possible a smooth, unbroken entrance from the street into private property, into garages, etc., and are especially adaptable for places where little headroom is available. Thin and compact, yet enormously strong due to corrugations. Offered in various sizes to provide ample water-way, and can be easily and quickly installed at low cost. Further particulars for the asking.

CALIFORNIA CORRUGATED CULVERT COMPANY

411 Leroy St., Los Angeles

400 Parker St., Berkeley

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of Pacific Municipalities, published monthly at San Francisco, for October 1, 1916.

County of San Francisco, } ss.
State of California

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Wm. J. Locke, who, having been duly sworn according to law deposes and says that he is the managing editor of the Pacific Municipalities and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 413, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, A. Carlisle & Co., 251 Bush St., San Francisco.

Editors, H. A. Mason and Wm. J. Locke, Pacific Building, San Francisco.

Managing Editor, Wm. J. Locke, Pacific Building, San Francisco.

Business Manager, F. J. Erb, Pacific Building, San Francisco.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) There are none.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) There are none.

WM. J. LOCKE.

Sworn to and subscribed before me this 7th day of October, 1916.

(SEAL)

(My commission expires Feb. 1st, 1918.)

HENRY B. LISTER.

RELIABLE FIRMS

The firms mentioned below specialize in municipal work or furnishing supplies for the same. They bear a good reputation for reliability and fair dealing. In case of proposed work or needing supplies you are urged to write them. Catalogs sent on request.

Asphalt Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Asphalt Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, California Bldg., Los Angeles.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Cast Iron Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Cement Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Concrete Mixers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

California Corrugated Culvert Co., Los Angeles and West Berkeley.

American Corrugated Culvert Co., 706 Hobart Bldg., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.

Bowers Rubber Works, 68 Sacramento St., S. F.

Flushers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.
Pacific Flush Tank Company, Chicago and New York.

Gas Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Hollow Tile

Gladding, McBean & Co., Crocker Bldg., S. F.

N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Co., Chicago and New York.

Inspection and Tests

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric Bldg., Portland; Colman Bldg., Seattle; Pauslen Bldg., Spokane.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251 Bush St., S. F.

Ornamental Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric Bldg., Portland; Colman Bldg., Seattle; Pauslen Bldg., Spokane.

Pavements

Warren Brothers Co., California Bldg., Los Angeles.

City Street Improvement Co., Whittell Bldg., S. F.

Pavement Materials

Warren Brothers Co., California Bldg., Los Angeles.

Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Playground Apparatus

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Pressed Brick

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Road Machinery

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Scarifiers

A. L. Young Machinery Co., 26-28 Fremont St., S. F.

Septic Tanks

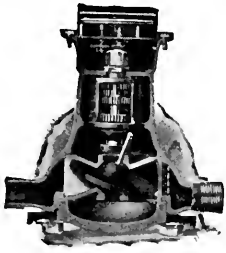
Pacific Flush Tank Company, Chicago and New York.

Sewer Fittings

Pacific Flush Tank Company, Chicago and New York.

Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

NEPTUNE METER CO.

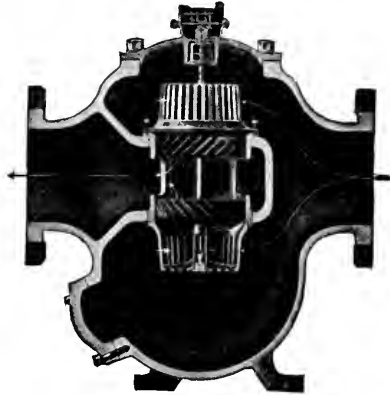
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters
Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Road Oilers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Rock Crushers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Roofing Tile

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

Sprinkling Wagons

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric
Bldg., Portland; Colman Bldg., Seattle;
Pauslen Bldg., Spokane.

Street Sweepers

A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Testing Materials

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Water Meters

Neptune Meter Company, San Francisco
and Los Angeles.

National Meter Co., 141 New Montgomery
St., S. F.

Water Pipe

United States Cast Iron Pipe & Foundry
Co., Monadnock Bldg., S. F.

Weed Killers

Atlas Preservative Company of America,
Rialto Bldg., S. F.

Street Signs

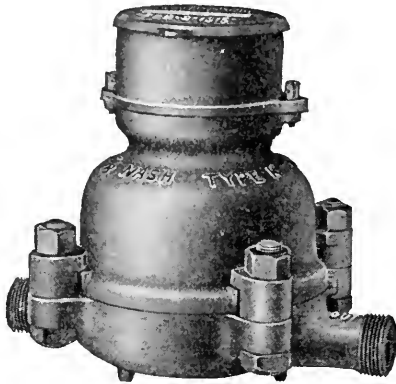
A. L. Young Machinery Co., 26-28 Fremont
St., S. F.

Vitrified Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

WATER METERS

SPECIALLY ADAPTED TO EVERY KIND OF SERVICE
IN SIZES FROM $\frac{3}{8}$ INCH TO 60 INCHES



Crown, Empire, Nash, Gem, Premier
Water Meters, Empire Hot Water, Oil
and Gasoline Meters, Empire Com-
pound Meters.

TYPE K NASH METER

Embodies the Highest Development in
Disc Water Meters. Liberal Propor-
tions. Rigid and Simple Construction.

Extreme Accuracy on Large and Small-
est Flows. Can be taken Apart with-
out Removing From Service.

National Meter Co.

ESTABLISHED 1870

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

NEW YORK by Rail and Ocean

Fares Same as All Rail, But Includes Berth and Meals Five Days on Steamer

TAKE "Sunset Limited" (No Extra
Fare)

FROM SAN FRANCISCO 4:20 P. M.
(Ferry Station)

Via SUNSET ROUTE to NEW ORLEANS

And There Connect With

Southern Pacific's Splendid *Ocean Liners*

Sailing Wednesdays and Saturdays to

NEW YORK

For Fares and Berths
Ask Agent

SOUTHERN PACIFIC

Mention "Pacific Municipalities" when writing for catalogs.

CITY STREET IMPROVEMENT COMPANY

GENERAL CONTRACTORS

PRODUCERS OF

SANTA CRUZ BITUMINOUS ROCK

The Best Paving Material in the World



Constructors of
BRIDGES,
WHARVES,
BUILDINGS,
JETTIES,
RAILROADS,
SEWERS, Etc.
PAVEMENTS
of all kinds.

ESTABLISHED
MAY 11TH, 1891

General Offices: 11th Floor, WHITTELL BUILDING, SAN FRANCISCO, CAL.

JNO. W. McDONALD, President

JAMES H. BISHOP, Vice-President

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE

HOLLOW TILE FIRE PROOFING

FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA SAN FRANCISCO

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Montreal

Mexico City

Seattle

Los Angeles

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,
FIRE PROOFING, ROOFING TILE,
FLUE LININGS, FIRE TILE,
LAUNDRY TRAYS,
ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.

Mention "Pacific Municipalities" when writing for catalogs.

Pacific Municipalities

A Monthly Review of Municipal Problems and Civic Improvements

OFFICIAL ORGAN OF THE LEAGUE OF
CALIFORNIA MUNICIPALITIES

LEAGUE OF
PACIFIC NORTHWEST MUNICIPALITIES
OREGON—WASHINGTON—IDAHO

THE MUNICIPAL LEAGUE OF MONTANA

—AND—

BOARD OF SUPERVISORS ASSOCIATION
OF THE STATE OF CALIFORNIA



NEW CITY HALL, SACRAMENTO

LEADING ARTICLES IN THIS ISSUE

Proceedings Nineteenth Annual Convention, Visalia—	487
Departments of Engineers, Councilmen and Street Superintendents	492
Statistics of Municipal Refuse for Los Angeles, California	500
Public Expenditures	509
The High Cost of Supplies to Municipalities	515
Smoothing Out Wavy Streets	517
Address by Christopher Bradley, Esq.	526
League of Washington Municipalities	528
Contents of Volume 30	533
Book Reviews	530
Titles of New Ordinances Received	532
What Our Pacific Coast Cities Are Doing	

Hon. John S. Chambers
J. F. Ryxbee, Jr.

Publication Office
Pacific Building, San Francisco, Cal.

Two Dollars a Year
Single Copy 25 Cents

City Clerks

must make their report to the State Controller, and our SEGREGATION LEDGER assists you to form a report that is most acceptable to the Controller and a great time saver in preparing.

Write us regarding the Ledger and allow us to solve your Report Troubles.

Assessments

Now is the time to place your order for the CITY ASSESSMENT ROLL AND LISTS.

We are forming our annual "combination" run—and by allowing us to supply you—insures you "the Roll on time" and at the correct price.

Street Improvements

Our new forms are prepared to meet the latest changes in all STREET IMPROVEMENT ACTS.

We can furnish forms for the Act that your Charter provides, and our line of Street Improvement Bonds is legally correct.

Have you a copy of W. J. Locke's publication of Improvement Act of 1911 with Amendments, also Act of 1915?

Send for a copy as it contains valuable information.

Price - \$2.00

A. CARLISLE & CO.

Specialists in Municipal Supplies

251-259 Bush Street

San Francisco, Cal.



"Americanisms"

My town is my outdoor home.

Its prosperity adds to my welfare.

Success is just as sure in my town as elsewhere, perhaps surer.

It has all the advantages of a clean, busy, prosperous, well-lighted town.

It is a beautiful town by night as well as day.

We are all safer out of doors, or in the dead of night, because of Good Street Lighting.

I'm proud of my town—it is giving me a good livelihood—it has made us all happier—it has spread good will from the highest to the lowest in the community—it is a GOOD town

Because the streets are G-E Lighted

General Electric Company

Pacific Coast Sales Offices in San Francisco, Los Angeles, Portland, Seattle and Spokane; Rocky Mountain Sales Offices in Denver, Colorado, Salt Lake City, Utah

53-4



dumping sites and there is danger that the gases emanating from the decaying raw garbage may be detrimental to the health of adjacent districts. To eliminate this danger, the method of sanitary fills has been introduced, where dumping instead of incineration or reduction is resorted to.

This consists in depositing the garbage in layers about 8 inches deep and distributing on top of each layer earth to a depth of from 4 to 6 inches. If the refuse is particularly offensive, a solution of carbolic acid and soda is generally used as a deodorizer and germicide.

When geographical conditions are favorable, a city may be divided into a number of districts and one or more such sanitary fills located in each subdivision. This minimizes the haul and permits the use of fewer wagons. It is economical, since one man is often able to distribute and cover from 15 to 30 tons per day.

This method has been successfully used in Seattle, after the engineers had made extensive and costly experiments with several incinerators which are now idle. The physical conditions of Seattle and the nature of the refuse are peculiarly favorable to disposal of sanitary fills. There are depressions and ravines at frequent intervals throughout the city area and these are being filled by the Department of Refuse Disposal in such a manner as to create no nuisance and improve the value of the property for business and residential purposes. The city collects and disposes of all of its refuse, which in the summer amounts to more than 300 tons daily and over 400 tons daily in winter, at an expense of 72 cents per capita per annum. The ratio of the tax for this purpose to the total assessed tax is .00474, or one and one-tenth mills out of the total assessed taxation of twenty-one and one-tenth mills on the dollar. About \$200,000 was expended for three incinerating plants, now disused, before this method was adopted, which proves that time spent in investigation of the several available means of disposal is not wasted.

Cities located near the coasts have frequently employed the plan of dumping garbage at sea. The refuse is loaded on large scows, which are towed a con-

siderable distance from the shore, and emptied. Wherever this plan has been adopted, however, there has been universal complaint that remnants are washed on the beach, making it unsightly and offensive. This was the experience of San Francisco and other Bay Cities when Oakland was permitted to dump garbage in the ocean opposite the entrance to San Francisco harbor. The same was also the experience of several large cities on the Atlantic Seaboard.

The second method of garbage disposal is by reduction. The four principal processes are the Merz, the Simonin, the Arnold and the Cobwell, or modification of one or more of these.

In the Merz process, the garbage is first dumped into hoppers and the surplus water drawn off. It is then spread out and any salvable articles removed. Next it is placed in hot air driers and stirred for six hours, then conveyed to extractors or closed tanks where naphtha is added and allowed to percolate through the mass, thereby removing all grease, which is drained off and sold, after the solvent has been re-vaporized and recondensed for continuous use. The tankage is ground, sifted and sold for fertilizer and fuel.

The Simonin process omits prior drying. The garbage is dumped into pans provided with steam coils for heating the contents. These pans are placed in closed vessels and naphtha allowed to filter in. Steam is then directed through the coils and the grease dissolved by a portion of the naphtha. The heat of the vessel evaporates the remaining naphtha, which, with the water and grease from the garbage, is drawn off and separated by steam heat. The tankage is dried and sold.

In the Arnold process the garbage, after salvage has been removed, is dumped into digesters and cooked for several hours under pressure of live steam. It is then allowed to fall through roller presses which separate the fluid from the tankage. The grease, water and liquid remnants are separated by gravity. The tankage is ground for fertilizer or fuel.

The Cobwell system is a development

and improvement of the earlier processes. It consists of dumping the garbage into steam jacketed containers which are fitted with interial stirring apparatus. A naphtha or gasoline solvent is then introduced into the container, where it floods the garbage, and steam is next turned into the jackets. This boils the container contents, which are being continually agitated by the stirring apparatus. After several hours' boiling, the solutions and liquids are drawn off to separation and distillation tanks and the solids dumped from the digesters and conveyed to driers. From the driers the tankage material passes to rolls or other apparatus, which desiccates it still further, and where any undesirable materials are separated. The remainder is then in a form suitable for fertilizer or fuel. After distillation of the solvent (naphtha or gasoline), the grease is ready for further treatment or for sale direct.

The advantage of the reduction process is that all organic and putrescible matter in the refuse is converted into harmless residuals, some of which have a considerable commercial value. Its disadvantages, however, are that it requires frequent renewals of expensive machinery and apparatus, skilled labor, separate collection of garbage and dry refuse and produces odors which are exceedingly offensive. As the works must be situated far from the densely populated districts in the city, haulage costs are increased. Moreover, numerous serious accidents have recently occurred in reduction plants, and since, in order to be operated economically, these must have a large capacity, such a disaster, besides causing possible loss of life, generally cripples the entire garbage disposal system.

The art of incineration of city refuse has not yet passed the experimental stage. Notwithstanding this, there are manufacturers, contractors, agents and even engineers who dispute this fact in an endeavor to convince municipal councils and officials of the worth of their particular furnaces. They are often willing to sign guarantees for the sake of a profit or commission—covering operating costs, maintenance and

repairs, absence of smoke, dust and all very objectionable features for the incinerators they are paid to exploit. **The fact remains that there are very few, if any, incinerating plants in the United States that are giving the satisfaction that was predicted for them before they were built and put into operation.** Almost without exception, the incineration experts of the United States—some of them able engineers—have been those who were interested in the promotion and sale of some particular type of destructor or incinerator. This is natural and stated as a fact rather than as a criticism, for the same is true of many other developments of applied science.

An essential consideration that most of these designers have overlooked is, that a furnace which gives satisfactory results under a certain definite combination of physieal conditions may, and most probably will, prove entirely unsatisfactory when one or more of these physical conditions are changed.

To illustrate, a certain incinerator proved entirely satisfactory in some of the smaller cities of England. In that country several were built in high-class residential sections and when placed in operation produced no obnoxious smoke or odorous gases. The cost of disposing of the refuse was small, as no additional fuel was required. The only cause of complaint arose from the fact that a line of garbage wagons passing their palatial entrances did not appeal to the sense of propriety of the aesthetic residents. This was obviated by compelling the scavengers to deliver their loads at night.

Encouraged by the success of these plants in their own country, the patentees decided to broaden their field and secured a contract for erecting one of their incinerators in a western American city. Broad guarantees were given that no smoke would be emitted from the chimneys; no odors emanate from the plant. When the furnaces were fired for a trial run and garbage dumped on the grate, the smoke generated was dense and continuous, the odors emitted were profuse and repulsive. The residents of the city were surprised and chagrined, as likewise, it is just to add,

were the exploiters of this particular type of incinerator. Tardy analysis showed that the garbage in the English cities contain a large percentage of hard coal cinders, which, in burning, produced a temperature sufficiently high to prevent smoke and odor, while the garbage in American cities contain a smaller percentage of combustibles and more moisture, and consequently evidences of its combustion were disagreeably in evidence, both to the eye and to the nose.

Another important variable factor which must be studied in incinerator design is the amount of moisture in the garbage to be consumed. The moisture in the garbage will dictate which of the following five distinct types of destructive furnace is best adapted to the needs of any incinerator plant:

First: Destructors in which refuse is burned on a grate without preliminary drying. This type is suitable for rubbish which is not mixed with domestic garbage.

Second: Furnaces in which refuse is burned on a grate after preliminary drying on an adjoining hearth. This is the British type of incinerator. For its successful operation a deep bed of burning material continuously on the grate and a strong forced draft are essential. The best known of this type are the Thackeray and Horsfall incinerators.

Third: Furnaces known as the American type, in which garbage is burned on a grate by subjecting it to an intense heat, a considerable portion of which is produced from fuel fires on separate grates. In these furnaces, besides the fuel fire necessary to incinerate the garbage, there is another used to superheat the gases from the garbage combustion before they have discharged into the atmosphere. The best known incinerators of this type are the Engel, Morse, Boulger, Dixon and F. P. Smith.

Fourth: In this type of incinerator, garbage is first thoroughly dried on one grate and then stoked to another hearth to be burned as fuel. The Decarie, F. P. Smith and H. B. Smith incinerators are the best known of this type.

Finally there is the incinerator in which gases of combustion from gar-

bage burning in one cell are passed to adjacent cells to dry the garbage therein and render it more readily combustible. The Walker and F. P. Smith patents are representative of this type.

As previously noted, each of these types is adapted to certain particular conditions under which they give fairly satisfactory results.

If their promoters carefully studied these conditions and were frank about stating that only under these conditions would the guarantees hold, such trouble would have been avoided by many American cities. The fact is, the designing engineers have not been able to disassociate their capacity as engineers from their ability as salesmen, and the confusion of the two influences has led in numerous instances to an absolute misrepresentation of fact. Most salesmen endeavor to convince themselves of the worth of the article they handle, in order that their arguments with others may bear more conviction. This self-hypnosis is a necessary training for successful salesmanship, but it is very detrimental to the advance of an applied science such as garbage incineration.

Experiments in this line are costly and it is not a matter of pride that **out of 180 incinerating furnaces erected between 1885 and 1908 no less than 102 had been dismantled or abandoned before the end of the year 1908.** This furnishes no conclusive evidence against the efficiency of the American type of furnace, which English engineers are so fond of criticizing, but it argues a lamentable lack of study of the local conditions to meet which these incinerators were designed.

It is admitted that, with the addition of sufficient fuel, garbage of any description can be destroyed without offense. Here, however, is introduced another vital consideration, namely, the cost of disposal.

For ordinary incinerator plants, with a capacity of, say, 100 tons per 24 hours, the labor cost for burning should not exceed 50 cents per ton. Collection costs may vary between \$1.50 and \$2.50 per ton, so that a fair average total cost of collection and disposal will be in the

neighborhood of \$2.50 per ton. Generally speaking, the larger the plant and the nearer it is located to the center of population, the less will be the total cost of disposal.

Steam is sometimes generated as a by-product of incineration. This proves economical only when refuse alone is burned without any domestic or wet garbage.

One hundred tons of refuse will afford a considerable quantity of steam and the value of this should be taken into consideration. Some of the modern destructors with steam generator adjuncts will evaporate one ton of water in the boilers for each ton of total refuse burned, but unless this steam can be profitably disposed of, its generation is useless.

Since the temperature in the furnaces is unsteady, the power output likewise fluctuates. Unless the steam can be used to supplement peak loads or some other continuous source of steam supply, its generation during the process of incineration is seldom economical.

The method of disposal by feeding garbage to pigs is sometimes economical and has its advantages. Quite a number of the smaller cities in the United States dispose of a part or all of their garbage by this means. Four cities maintain municipal piggeries, and two of them are said to be conducted at a profit.

To summarize, having an outline of the principal methods employed, it remains for the municipal engineer to make a thorough study of the existing conditions which he must meet before deciding which means shall be adopted to dispose of the garbage. Whether it should be burned or buried, or a part burned and the remainder buried; whether the domestic garbage should be collected separately and reduced, while the refuse is incinerated; whether all classes of waste ought to be incinerated, are the questions that must be first determined by each individual city. Next will come the choice of a plant, unless burial is the means adopted. In the choice of this plant the amount of combustibles in the garbage and the moisture content must be carefully

analyzed. The probable cost of incineration will also be a subject requiring extensive study. The location of the plant with respect to the center of population requires thought and very frequently it is necessary to overcome public prejudice in this regard.

The National Engineering Societies have from time to time appointed committees to standardize engineering practice with regard to testing structural materials, designing buildings, sewer systems, water supplies and railway transportation. It is a lamentable fact that so far neither the American Society of Civil Engineers nor the American Society of Mechanical Engineers have seen fit to appoint a committee to investigate and report upon standardizing the data on methods of garbage disposal.

The League of California Municipalities could accomplish much by naming a committee, composed of prominent local engineers, who would investigate this question as applied to the principal needs of the Pacific Coast cities. If such action is taken by the national societies and by your organization, the next ten years would probably see an advance in this science which would greatly contribute to the health and comfort of the various communities which you represent.

Mr. Knowlton: Mr. Chairman and members of the League: It has been indicated by the paper just read that our cities might have some difficulty in deciding upon what type of a plant should be used for garbage disposal. **Los Angeles has been very fortunate during the last two years in having a plant in use which has proven quite satisfactory.** This plant was elected by the Pacific Reduction Company, of Los Angeles, which employs the reduction process used by the Cobwell Company of Cleveland, Ohio. The plant has been in operation since March, 1915, and its location in the city has, so far as I know, never proved offensive to those living nearby.

In order that I may present to you some figures regarding the Los Angeles plant, I have prepared the accompanying tabulation of statistics of municipal

STATISTICS OF MUNICIPAL REFUSE FOR LOS ANGELES, CALIFORNIA.

City	Los Angeles, California.	
Population	City proper.....	474,000
	Hollywood.....	60,000
	San Fernando Valley	8,000
	Palms.....	
	Shoe String.....	12,000
Harbor District.....		12,000
Total.....		554,000
Tons of refuse per year	Garbage.....	55,800 (an average of 153 tons per day)
	(Non-combustible (by City), 8,020.)	
	Total (Combustible by Pac. Red. Co., 4,250), Total, 12,270.	
Average Weight of Refuse.....	Rubbish.....	Rubbish low on account of the general use of oil and gas for fuel, and many of the private collectors do not deliver to Pac. Red. Co.
	Garbage.....	1,200 lbs. per cu. yd.....
Mechanical Analyses of Refuse.....	209 lbs. per capita per year	
	575 lbs. per 1,000 pop. per day.	
Number of houses from which Garbage is collected... 47,000	Rubbish.....	370 lbs. per cu. yd.....
	126 lbs. per 1,000 pop. per day.	
House Treatment.....	Garbage 69, Paper 17, Dust 7.	
	Rags, 2, Glass 3, Metal 8, Straw 3.	
Is Garbage collection done by City or by Contract?	Garbage—Size of can.....3 to 16 gals.	
	Type of can.....Metal with cover.	
	Is can set out for collection? 5 ft. from property line or alley; 50 to 75 ft. from property line where there are no alleys, or on curb if there are no side entrances.	
Does City own Stable and Equipment?.....Yes.	Is garbage separated?.....Yes; in two parts, but neither drained or wrapped in paper.	
	Non-combustible.....Rules for size and placing of cans are the same as for garbage.	
Number of Collections per week	By City, using 69 steel canvas-covered 4-yd. wagons drawn by 2 mules, 1 attendant. Wagons cost \$175.00; 1 to 2½-ton trucks, 1 driver, 2 collectors for Hollywood Section.	
	Garbage.....165 Routes—Haul from 100 routes of 3½ to 4 miles; from 36 routes over 5 miles.	
	Maximum Haul equals 10½ miles.	
Average cost of collection per ton.....	Non-Combustible.....6 Districts from each of which collections are made once per week, the amount varying due to scavengers. The City receives \$100 per month from scavengers who pick over dump.	
	Garbage.....1 Long Haul—The nearest point of collection is 8 miles from the plant.	
	Hollywood and westerly section.....\$2.75	
Method of Disposal.....	2. Residence District.....2.39	
	3. Business District.....1.15	
	Average for entire City.....1.97	
Products of treating Garbage per ton.....	Non-Combustible.. Year ending June 30th, 1916—48,000 cu. yds. @ 94 cents per cu. yd.	
	Garbage.....Reduction.	
	Combustible.....Private collections made, and incinerated after sorting for paper, etc.	
Summary of Costs in Los Angeles for Garbage Collection and Treatment.	Non-Combustible.....Collected by City—7 motor trucks, each 10 cu. yd. capacity and dumped into excavations over the City. Cost \$9.75 per truck per day.	
	Tankage—310 lbs. (used principally as a fertilizer @ \$14.00 per ton	
	Grease—62 lbs. @ \$0.05; lb.	

SUMMARY OF COSTS IN LOS ANGELES FOR GARBAGE COLLECTION AND TREATMENT.

Item	Cost per ton of Garbage	Cost per Capita per Year
(A) Collection	\$1.97	\$0.21
(B) Water required for plant	1.05	11
Sum.....	\$3.02	\$0.32
Am't. received by City from plant	\$0.51	\$9.05
Net cost to City.....	\$2.51	\$0.27

refuse in Los Angeles. After giving you these facts, I wish to make a few suggestions and recommendations concerning the matter Mr. O'Shaughnessy mentioned in regard to the committee which might be appointed to investigate and report upon the standardizing of the data on methods of refuse disposal. With your permission, Mr. Chairman, I will now refer to these figures.

The City of Los Angeles has a population of about 554,000. It is spread over a considerable area which is larger than that of any other city in the United States at the present time. A glance at the map of this city will, I think, convince you of that fact. On this account, the collection of garbage will probably be a problem in the future,—and I may say that it is already somewhat of a problem.

The contract for the Los Angeles plant was prepared and the specifications adopted in 1913. At that time a ten years' contract was made with this company, by which the city would receive for the delivery of garbage a certain amount, namely 51 cents per ton, for all garbage delivered at the plant. In March, 1915, when this plant began operations, there was a delivery of about 25 tons a day, and that was increased gradually until January 1st of this year, at which time this plant was taking all the garbage produced in the city of Los Angeles. The amount of garbage has averaged about 153 tons per day during the past fiscal year, and it was estimated that

there was about 12,000 tons of non-combustible rubbish collected.

It is estimated that this garbage weighs about 1200 pounds per cubic yard, and the rubbish about 229 pounds per cubic yard. This is equivalent to 209 pounds of garbage and 46 pounds of rubbish per capita per year. The refuse is composed mainly of garbage, being 60% garbage, 12% paper, 8% metal, 7% dust, 3% glass, 2% rags, and 3% straw. This refuse and garbage is collected from 48,720 different places, divided as follows: 512 places are served 7 times a week, 11,058 places are served 3 times a week, 37,150 places are served 2 times a week. It is collected in metal cans holding from 3 to 16 gallons per can, with metal covers. These cans are set out for collection generally in front of the property, but in case there is an alley in the rear, it is placed near the alley line.

The rules of the city require that cans shall be placed five feet from the property line for alleys and from 50 to 75 feet from the property line for streets. If there is no side entrance, cans must be placed on the curb.

The refuse is separated into two parts but the garbage is neither drained nor wrapped in paper as is done in some other cities.

The collection of the garbage in Los Angeles is done by the city. There are 60 steel, canvas-covered wagons, each holding about four cubic yards, which are drawn by two mules with an attendant. The material is taken to the garbage plant in the southeasterly portion of the city, and there treated. I think

NOTES.

The Pacific Reduction Company of Los Angeles referred to in the foregoing was awarded a contract on October 22, 1913, for the treatment of the garbage of the city. The process used by this company is that known as the Colwell System, the offices of which are located in Cleveland, Ohio, and New York City. A description of the local plant in Los Angeles, together with that of the process in use was described in the Municipal Journal of June 10, 1915. At the present time there are 30 cookers in use which treat between 5 and 6.5 tons per day.

This company began operation in March, 1915, with 25 tons of garbage, the amount gradually increasing until January 1, 1916, at which time all of the garbage was taken over by the company.

According to the terms of the contract the city received 51 cents per ton for all garbage received at the plant. In addition thereto it receives from the company \$3.00 for each dead horse or cow and 50 cents for each small animal.

With reference to the summary of costs noted at the bottom of page 2, attention is called to the item of water required for the plant. For the year ending June 30, 1916, the average amount of water required by the plant was 1500 cubic feet per ton. According to the usual city rates of 7 cents per 100 cubic feet this would amount to \$1.05. As, however, this amount is subject to change, allowance should be made therefor in using the net cost to the city for collection and treatment. It has been proposed recently to have the city furnish the company, free of charge, 1200 cubic feet of water per ton of garbage, the company to pay for all water used in excess thereof.

The total cost of collection given in the summary includes the overhead charges, interest and depreciation on this part of the work.

probably the process has been so well described at different times that I will not at this time, unless it is desired, go into it further than to say that after being taken to the plant, it is lifted off the trucks, and dumped into the green garbage building, and then after a process of segregation, is taken over a belt into the reducer building, sorting out the paper and other material which is used by the plant in producing steam.

The garbage, after being treated in the cookers, reduced, ground up, and sacked, is then ready for delivery. This material is sold for fertilizer, or for chicken or hog feed.

In reference to the matter of a nuisance, I think that from the many times I have been at the plant, I have never noticed any odor which might be termed objectionable. There are, however, other plants of an industrial nature in this vicinity, the odors from which are objectionable.

The matter of collection is an item in our city which will require attention. For the Hollywood and westerly sections of the city, there have been two motor trucks placed in operation during the past year, each of which makes two trips a day, at an average cost of \$2.75 per ton. Each of these trucks has a driver and two collectors. It is necessary that this method of collection be employed, because the distance from the plant to the first point of collection in these sections at the westerly end of the city is about eight miles.

For the business district, the collection is made at night, and the cost has been found to be about \$1.15 per ton. In the residential section, the work is done in the day time, twice each week, costing about \$2.39 per ton. For the entire city, the average cost during the past fiscal year has been about \$1.97 per ton, which is a little more than that of the previous year. The costs of collection include the overhead charges, interest and depreciation.

The non-combustible material collected by the city is deposited in five different places, where there has been no objection. This is done by seven motor trucks, which have a capacity of about ten cubic yards. During the past year

there have been 48,000 cubic yards collected at an average cost of about 94 cents per cubic yard. The cost of operation of these trucks has been about \$9.00 per day.

Concerning the collection of the combustible rubbish, which is estimated to be about ten tons per day, the contract that was made with the company provides that it should be hauled to the plant by private collectors. This is done by over a hundred different parties. The contract also provides that market refuse shall be included. The company uses whatever paper of value comes to the plant, and I think thereby makes quite a profit.

Now, in regard to the analysis of our garbage in Los Angeles, it has been estimated that we have 310 pounds of tankage per ton of garbage, and 62 pounds of grease. Papers have been read before, relative to this matter, which have stated that the worth of this material was about \$3.00 a ton. After discussing the matter with the officials of the company, these amounts have been changed to \$2.17 for the tankage and \$3.41 for the grease.

There is one other matter in connection with the plant in Los Angeles which has received some attention, which is, that it requires considerable water. In fact, our water company will tell you that **the plant is the largest consumer of water in the city, and this expense has been something which has offset the 51 cents a ton which was to be given under the original contract with the company.** It is estimated that for the year ending June 30, 1916, the average amount of water required by the plant was 1500 cubic feet per ton of garbage. According to the usual city rate of 7 cents per 100 cubic feet, this would amount to \$1.05. This amount, however, is subject to change. It has been proposed recently, to have the city furnish the company free of charge, 1200 cubic feet of water per ton of garbage, the company to pay for all water used in excess thereof.

The American Public Health Association has considered the matter of garbage disposal in this country for some time. On this Coast, it has been thought

advisable that a committee should be appointed, which would analyze the different plants that might be in operation, and tabulate all details thereof. The speaker has been delegated a member of the Committee on Garbage Disposal of this Association, to obtain, during the coming year, some figures on this matter. It is in order, therefore, that he receive from those who have plants on the Western Coast and in California, all available data which would be in the form of answers to a questionnaire, which the speaker has prepared; the questions and answers for Los Angeles being noted in the accompanying tabulation.

Chairman Robson: Mr. Brown, of Oakland, is here. He is not on the program, but his city, in connection with Berkeley and some of the other cities, have the problem of garbage disposal ever before them, and when Oakland, through an act of God, some few months ago, was deprived of the use of a portion of its system, it was necessary for that city to dispose of their garbage without an incinerator, and their doing that on the tide or sand flats. Maybe Mr. Brown could add something to this discussion.

Mr. C. G. Gillespie, Director of the Bureau of Sanitary Engineering of the State Board of Health, is on our program. Is he present?

Supervisor John D. Hynes, of San Francisco: Mr. Chairman, may I ask the gentleman what it costs the average family for the collection of garbage in Los Angeles?

Mr. Knowlton: I have stated that the cost of collection for the entire city is an average of about \$1.97 per ton. The amount per capita averages 21 cents per year.

Mr. Hynes: I know you said you collected twice a week.

Mr. Knowlton: Twice a week from the residential section.

Mr. Hynes: You don't know what it costs for those two collections per week, do you?

Mr. Knowlton: Yes, for the residential section I stated it cost \$2.39 per ton of garbage.

Mr. Hynes: But you have no idea what each family pays?

Mr. Knowlton: No.

Mr. Hynes: For instance, you haven't as many flats in Los Angeles as we have in San Francisco, but for a private home you don't know what the charge would be in connection with the garbage collection?

Mr. Knowlton: No, I don't know at this minute. I might obtain it for you.

Chairman Robson: I think it would be well, too, if Mr. Jones would come up and let any of you ask him questions. This is a very interesting subject. The City of Berkeley is going to assume the municipal collection of garbage, and we are completely at sea as to what it is going to cost us. Mr. Knowlton has put figures before us, but they are not in such form as are applicable to our own local conditions. Very few cities in the State can build such an incinerator as the City of Los Angeles has, because one of their main items is in the high grade of their garbage, the amount that they get from dead animals and refuse from packing plants, which are not located in the smaller communities. That is one reason why they are able to operate—their garbage contains more tankage and grease than does the garbage of the ordinary small city. Mr. Jones, if you will come up and answer any questions anybody may have to ask, it will be interesting.

City Trustee H. A. Hopkins, of Taft: Mr. Knowlton, you made the statement that \$3.41 was received from the grease?

Mr. Knowlton: Per ton of garbage.

Mr. Hopkins: Does the City of Los Angeles dispose of that, or does some other person dispose of it?

Mr. Knowlton: The amount that it costs for collection is paid for by the City of Los Angeles.

Mr. Hopkins: But who attends to the sale of it?

Mr. Knowlton: The Pacific Reduction Company.

Chairman Robson: The City of Los Angeles, Mr. Knowlton tells you, does not own any garbage plant, but they

simply made a contract with a private individual to do that.

Mr. Hopkins: But is there a revenue offsetting the cost of that? For instance, does the hog-raising plan result in a profit?

Mr. Knowlton: Whether it results in a profit or not, the City of Los Angeles, I don't think, knows—that is a matter for the company to decide. The City of Los Angeles collects the garbage and takes it to the company and they sell the tankage and grease for the prices I named. Whether the prices they receive offset the cost of operation, I don't know.

Mr. Perry F. Brown, of Oakland: The City of Oakland is operating at the present what Mr. O'Shaughnessy called a sanitary fill. I have always objected to that combination of words, "sanitary" and "fill," when the fill is made of garbage. That was started in Seattle at a time they began that method, at which time they had four incinerators in the city, part of them in operation. But they got away with it, and it has become rather a popular term, so I guess we might just as well let it stand.

Due to an emergency, we had to find a way of disposing of our garbage, and find it quick. We have a levee about a mile from shore on the western front, enclosing an area that is submerged, and with an approach fairly direct from the center of the city. Our garbage is taken out there in the wagons it is collected in, and the fill made by dumping over a high bank, the idea being to maintain a steep face to the bank rather than fill in layers. In the first place, we were dumping it on submerged land, and had to keep the top above the high tide mark, and in the second place, I really believe that is the proper way of maintaining a dump. We keep the face about three hundred feet long, and, as the wagons come in, they are backed into position and dumped at the edge. The garbage containing the least paper in it we break over the edge, and the loads having a larger proportion of paper are left on top. This makes a fill of about ten feet deep, and there is a settlement of prob-

ably two feet in the course of a month. The fill becomes hard enough so that the wagons have no trouble carrying the loads over it until they get near the face, where they are helped out with an extra team. Three men and a teamster handle about 140 tons a day, at a cost of about 10 cents a ton for labor. **We have other costs, including roads and the bulkhead we built, making the total cost for this year about 17 cents a ton.** The dump is fenced off on the water side by a bulkhead part of the distance, and by a floating boom, so that the paper and other floating material will not get away.

I have examined this dump or portions of it at the age of four months, and find that the decomposition has taken place to a depth of about a foot. It will probably be slower here than where the dump is maintained on dry land; in the first place, portions of it are in salt water, and secondly, we pump sand over the fill to a depth of about four inches, hydraulically, and floor the dump with salt water. There is no noticeable odor, further than 2,000 feet at any time from the dump, and this occurs at the time fresh loads are being brought. I think the odor is not from the material in the dump, but from the material brought to it during the day and which is stirred up, due to handling.

Any dump has three curious problems, in my mind, other than the actual handling of the material. One is fire. We allow no burning material on the dump. In fact, we have, on previous dumps had considerable trouble with fire getting started, and it being very hard to control. **The second, which we have had no occasion to fight yet, but which might become a menace, would be the rats.** A rat-tight fence and trapping would be the remedy there. **The third is flies,** not so much the flies that breed in the dump as those that are brought in the wagons with the garbage.

The first three months of our experience, we had very few flies, beginning about the first of February. At the time warm weather came along, the flies became bad, and were breeding in

the older garbage as well as the fresh garbage, but I believe due to the larvae being brought in the garbage. The University of California co-operated with us in the control of flies, and we are using a formaline solution for killing what we can in that way. But our effort at present is to keep the flies from coming back into the city by washing the wagons. We have erected a pumping plant and tank, to which we supply salt water, and the scavengers are required to wash their wagons before leaving the grounds, and I believe this will do away with any trouble due to flies being taken back.

We also pump salt water onto the dump at the same time we are pumping sand, being about nine parts water to one part of sand, and there is no doubt that that is beneficial. **The portion of the dump that is six months old with a sand covering is hard and has no objectionable appearance at all.**

I believe that any city having the available location and no other means of disposing of garbage, could use this method. I feel that the method of handling the fill, though, is important, in that the bank should be kept steep, the material segregated to a certain extent, and care given to the handling. A good foreman will do more to keep a dump from being objectionable than almost any amount of science. **I do not believe that sorting should be allowed on the dump. There is a tendency to allow that on all dumps. But the amount of material that is saved, while considerable, is not attractive.** It goes back into the city to be sorted and no doubt is objectionable from the standpoint of health.

Until Oakland's present dump is moved, due to the necessity of using that land, I feel that the city will continue that method of disposing of its garbage. You must take into account, though, the fact that this garbage is a single collection, in which there is more refuse in the way of papers, than there is of kitchen refuse, and the loads are fairly well mixed, no lot coming of pure kitchen refuse. Unless there is some question, that is all.

Chairman Robson: Are there any questions to be asked of Mr. Brown?

Supervisor John O. Walsh, of San Francisco: I would like to ask, Mr. Chairman, what does it cost the householder in Oakland, especially in East Oakland, per month?

Mr. Brown: Oakland is unfortunate so far as solving the private scavenger collection is concerned, this is regulated to a certain extent, but it still is a private system. Under this form of regulation, **an ordinance is in effect, fixing the rates that may be collected. The minimum rate for a householder is 35 cents per month for single families.** Any other collection than from the family, takes a rate of one dollar per cubic yard. The city allows but one contract for the collection, the contractor to collect under the specifications and to take his pay under the rates fixed in this ordinance. The contractors bid for the privilege, and are paying the city a thousand dollars per month the present year for that privilege, so that the contractors are paying \$12,000 per year for the privilege of collecting, and the city is expending about \$7,000 per year for the disposal. Our collection is about 140 tons a day.

Chairman Robson: **The City of Berkeley also at present has its garbage collected by the same method as in Oakland, and the minimum price is 35 cents per family per month for one collection a week—that is for a can of not to exceed 2 cubic feet, I think.** The ordinance has a number of rates, some 25 or 30 of them, but I think it costs from 35 cents once a week to 45 cents twice a week, and as the collections are more numerous, the charges increase, and as the size of the can increases, the cost is increased also, and the garbage collectors secure their money directly from the people for whom they haul. In Berkeley they pay a certain amount a month per wagon as license for collecting garbage. Pasadena collects its garbage municipally. I wonder if anybody can speak for them.

Mr. Walsh: Haven't you an incinerator in Berkeley?

Chairman Robson: Yes.

Mr. Walsh: What does it cost you to incinerate?

Mr. Robson: About 70 cents or 80 cents a ton,—it is too high. Who can say a word for Pasadena?

Mr. Allin: Mr. Chairman, Mr. Hamilton has all that data.

Commissioner A. L. Hamilton, of Pasadena: I have here the report of the department in charge of the collection of garbage in Pasadena, for the month of September. I am speaking for the Commissioner of Public Health and Safety, who has special charge of that department and who suggested to me that the main facts in which you might be interested would be found in this report.

During September, and this is a typical month, there were collected 212 tons that were incinerated. There were 95 tons in addition that were not incinerated, but sold to private parties, who removed it from the city. What they did with it after removal from the city has not been the city's concern. Two hundred and twelve tons were incinerated, with this expense: salaries amounting to \$590; truck expense, including distillate, gasoline, oil, and monthly tire charges, \$31.65. Other expense for care of six horses, shoeing, repairs of every character, all together making a total of \$725, an average of \$4.41 per ton for collection. You will bear in mind that the garbage cans are not located on the curbs or parking, but the collectors must go to the rear of the premises, or wherever the garbage cans may be located, which may cause an additional expense. **In some cities I think they allow the garbage cans to be placed in front, but we do not.**

The incinerator charges run as follows: Engineer and proportional for the superintendent, \$125; for hauling ashes, water, light, power, etc., \$164.10. **The cost for incineration per ton is approximately 77 cents.** Thirty-two tons of ashes were removed. The income for the month was \$613, with an expense of \$890—a deficit of about \$275—that is, it cost the city about that much to take care of the incineration charges and the collection, over and above the receipts. The receipts run similar to

those of Berkeley, the charges are also very similar.

I think the commissioner in charge of that department has come to the conclusion that the city ought to handle the entire business of rubbish collections of all sorts, eliminating private parties entirely and incinerating and looking after all the matters that pertain to collection. He has come to the conclusion that that is about the only really satisfactory method of handling it.

Mr. Walsh: I would like to ask the gentleman a question. You say you have a deficit every month. How do you make up that deficit? Do you make it up at the end of the year out of the general fund?

Mr. Hamilton: We have a budget appropriation carrying this.

Mr. Walsh: You anticipate that at the time you make up your budget?

Mr. Hamilton: Yes. When we began the handling of garbage and the incinerator, we had no charge at all to the householders, paying all costs from the general budget appropriation. We have a general budget appropriation which covers the cost, and we reckon the receipts of the department to offset it, so that at the end of the year our budget appropriations have paid the deficit.

Mr. Walsh: Then for your type of incinerator, you use fuel?

Mr. Hamilton: Yes, when it is necessary.

Mr. Walsh: And force draft at the same time?

Mr. Hamilton: Yes, force draft. But the quantity of oil which is used is very small. Mr. Orbison, our City Engineer, can answer that.

Mr. R. V. Orbison, City Engineer of Pasadena: We are using no oil whatsoever at this time. In fact, the oil was eliminated about two years ago.

Mr. Walsh: How do you set the material in your furnace on fire?

Mr. Orbison: **All of our garbage is drained and wrapped in paper,** and they use that, and also the rubbish that the private collectors choose to haul to the incinerator. The item of oil used

to be a very irregular item, but especially since they have been selling the garbage of one kind, that is, the assorted garbage, they have cut out the oil on account of the inflammable material in the refuse.

Mr. Walsh: Then you must have two chambers, one that keeps a continual fire.

Mr. Hamilton: Yes, there are four chambers, each with two front doors. The material to be incinerated is deposited from above.

Chairman Robson: There is one thing that struck me. The total amount of the garbage consumed by the incinerator was only 212 tons a month, and that is about eight tons for 25 days, providing you do not collect on Sunday, and it seems a very, very small amount for a city the size of Pasadena. In Berkeley we average from 30 to 35 tons daily.

Mr. Hamilton: The total amount collected was 307 tons, and 95 tons of that was sold to outside parties. Besides, the privilege is given to outside parties to collect, from certain institutions, such as hotels and other places, and they take a large amount of garbage.

Mr. Robson: The same thing applies in Berkeley. I wonder where we get all the garbage. We average 1000 tons a month.

Mr. Christian Hoff, of Berkeley: I would like to ask Mr. Hamilton a question. How many householders do you collect from?

Chairman Robson: You collect from everybody in town, don't you?

Mr. Hamilton: No, not everybody—about 33 $\frac{1}{3}$ % of the total householders. I should think.

Mr. Hoff: You see we in Berkeley make the round of about 8,000 householders, and we have perhaps a larger population—you have 40,000 inhabitants, have you not?

Mr. Hamilton: Over 40,000. And I will say that it seemed a rather remarkable thing that, when we were collecting the garbage free, the proportion was only about that, it didn't run over or very much over 33 $\frac{1}{3}$ % of those who desired their garbage removed by

the city. **The householders wrap their garbage, place it in the cans, and it is perfectly sanitary.** I haven't heard of any objection to the garbage that is disposed of by those who do not furnish it to the city's collector.

Mr. Orbison: I might add to Mr. Hamilton's remarks that I had the same question asked by a party in the East, and I had an average, I think, for nine months, and the average was a trifle over six tons incinerated per day. That is on a basis of thirty days a month.

Chairman Robson: Do you weigh everything going into the incinerator?

Mr. Orbison: Everything that goes in is weighed. Furthermore, I will state that collections are made twice a week at the residences, and the hotels, I think some of them require even twice a day.

Chairman Robson: What is the capacity of your incinerator in tons per day?

Mr. Orbison: Ninety tons a day.

Chairman Robson: And you are only burning nine?

Mr. Orbison: Yes.

Chairman Robson: No wonder it costs money.

Mr. E. K. Knowlton, Engineer Sewer Department, Los Angeles: Mr. Chairman, in regard to the matter of Pasadena, I might state that the values seem to be consistent with those of Los Angeles. The weight of garbage of Los Angeles is approximately a quarter ton per thousand population. You have 40,000 population and that makes about ten tons, and I should think that would be consistent with our experience in Los Angeles.

Mr. M. L. Hanscom, City Auditor of Berkeley: What is the method of collection of the fee?

Mr. Hamilton: Once a month a bill is sent for garbage service which is payable at the office of the City Treasurer. Payments may be made in advance, for three months or more.

Mr. Hanscom: The point I want to get at is, do you keep an account with every householder?

Mr. Hamilton: An account with every householder from which the city collects garbage, yes.

Mr. Hanseom: Then you have to open about 2500 accounts?

Mr. Hamilton: Yes.

Mr. Hanseom: How many men does it take to handle that accounting?

Mr. Hamilton: One office man.

Mr. Hanseom: Can he do all that?

Mr. Hamilton: Yes.

Mr. Hanseom: That is a pretty good record.

Mr. Orbison: I might answer that by stating each resident or each card has a certain rate, it is not like the water department, where you are using a variable, or like a light account, where you use a varying amount of light, where each individual bill has to be checked up. In other words, for John Jones and all the way down the list, this rate is given. **And so, with the aid of an addressograph, it can be easily done.**

Mr. Walsh: How do you set the rate?

Mr. Orbison: By ordinance.

Chairman Robson: Is there any further discussion on this subject? Is there anything else that any of you wish to bring out at this time? Mr.

Knowlton, of Los Angeles, asked that these figures be sent to him on the cost of garbage collection and incineration. I don't know that it is necessary to appoint a committee to gather that data, but Mr. Knowlton can find out from the League those cities which are maintaining incinerators at this time, and I presume that a request of the proper officials in those cities shall be complied with. If there is nothing else, that winds up the program for this afternoon. **The meeting tonight is in this hall, and the entire body will meet together. We will have an illustrated stereopticon lecture by City Engineer Orbison and Commissioner T. D. Allin, of Pasadena, on "New Ideas Regarding Sewage Disposal."** We will now stand adjourned.

ERRATA in re EDWARD M. LYNCH.

On page 433 of last month's issue reference is made to H. B. Lynch of Glendale, and later again on page 468. This is an error in both cases as the man referred to is Mr. Edward M. Lynch.

The President: Gentlemen, we will now have the pleasure of hearing from Mr. John S. Chambers, our State Controller. He is going to give us a talk upon the general subject of public ex-

penditures. We have listened profitably to Mr. Chambers during the last two or three conventions, as well as from Mr. Cooper, the statistician in his office. Gentlemen, Mr. Chambers. (Applause.)

PUBLIC EXPENDITURES

An Address by Honorable JOHN S. CHAMBERS,
State Controller of California.

Mr. President and Gentlemen: I am sorry to say that Mr. Cooper will not be able to be with us this time. Like myself he is suffering from a severe cold, and we didn't think it right for him to take the trip.

I notice in the last issue of "Pacific Municipalities" that I am down to talk

to you upon the subject of "Suggestions." Perhaps, in a rambling way, I may be able to make one or two suggestions to you. To begin with, I don't think I am betraying confidence when I say to you that there has been a certain group against the administration in California, and a certain group for it,

with the administration more or less for itself, and each of these groups, whenever they want to know anything about receipts or expenditures, and generally it has been expenditures, have come to the Controller's office to get it. And, being a public officer, I could not refuse it to any of them.

Much has been said during recent years about the ever-growing govern-

been a marked expansion in the functions and cost of government. Expenditures have increased faster than population and in all probability faster than wealth or income. In this respect, at least, we appear to have solved the problem of perpetual motion.

How long will this condition of affairs continue? How long can the people carry the burden? What is wrong?



WALLACE RUTHERFORD

City Attorney of Napa, President of the League of California Municipalities

mental expenditures and the ever-increasing tax burdens, not only upon the part of the Nation, but also upon the part of the States, the counties and the cities as well. During the past two decades, especially the last, this drain has been particularly noticeable. Each year it has become heavier. There has

What are the remedies? These and similar questions await answers. The first thing necessary, of course, is an intelligent study of the situation. Until we understand it, we can not hope to know the causes and unless we know the causes we can not apply the remedies. Here and there, fiscal officials have been

and are devoting earnest thought to this great problem and aiding in the solution of it by giving publicity to their views. Likewise, National, State and local tax associations are studying conditions and to the best of their ability, generally speaking, throwing light upon the subject.

EDUCATE THE PEOPLE.

Under the various forms of government as they exist in this country—Federal, State, county and city—the people, in the final analysis, are held responsible for governmental results, including increases in expenditures and corresponding increases in the tax burden. That is to say, the people rule; they compose the court of last resort. As they decide, so must it be.

But while this is true, experience has demonstrated—and in the very nature of things it could not be otherwise—that it is far more true in theory than in fact.

While we are a government of the people, for the people, by the people, yet it is not possible for all the people, or any considerable portion of them, to keep in close touch with governmental affairs, to have a clear understanding of the complex developments constantly springing up, to exercise an intelligent supervision along all lines and thus act sufficiently in unison to control detail. Even if the inclination to so act existed upon the part of the people, it could not be gratified except in a limited way. They are too much engrossed, and largely necessarily so, in their private affairs. The necessity of "earning a living," of supporting the family, is the controlling force. Not that this entirely excuses them because of indifference to or ignorance of public affairs, though it does to a large extent, more especially when we look back over the years and appreciate that their attitude is also influenced by tradition and custom, by the habit of considering public business as everybody's business or nobody's particular business, of drifting along.

And so the initial responsibility, after all, is not upon the people but only upon that portion of them possessing the inclination and especially the ability and the opportunity to study governmental

matters, particularly the financial questions, and those who by reason of being officials owe a peculiar duty to the public. The first burden is upon them. If, when the facts are laid before the people, they fail to respond, then the responsibility is theirs. The need of the hour is the education of the people along governmental lines, especially financial lines, and we can not hope for much relief from oppressive tax burdens until this has been accomplished, or at least is well under way.

FACTS AND FIGURES.

Before attempting to discuss the causes of the heavy increase in expenditures or to suggest remedies, perhaps it would be well to lay the foundation by giving facts and figures not only as to California and her counties and cities, but also, by way of comparison, percentages as to the averages of the other States and their subdivisions, and the Nation.

TOTALS.

The total receipts of the State and its cities and counties for 1915, from all sources, was \$167,012,148 and the expenditures for all purposes \$176,422,681.

As the Controller's office did not begin to keep a record of the financial transactions of the State's subdivisions until five years ago, I can only give the percentages of increase as to receipts and expenditures for the cities and counties for that period. One or two of my predecessors tried to gather data of this kind, but having no law, as we now have, to back them, failed.

STATE.

The State's receipts from all sources in 1915 were \$29,830,182, an increase of 66.7 per cent in five years. The average of all the States for the ten-year period running from 1903 to 1913, was 94.3 per cent, California's increase in that decade having been 91 per cent, and the Federal Government's, 45 per cent.

The State's 1915 expenditures for all purposes totaled \$36,529,593, an increase of 103 per cent for the five years in question, as against an average of 105.9 per cent for all the States from 1903 to 1913, with an increase in that decade of

115 per cent for California and 54.5 per cent for the Washington government.

California's percentages of increase for receipts and expenditures on the five-year basis is under that of the average of all the States on the ten-years' showing, but for the decade quoted her expenditures are slightly over the average of the other States.

COUNTY.

The counties of the State, exclusive of San Francisco, collected in 1915 the sum of \$68,457,388, an increase of 66.5 per cent in five years, as against 85.8 per cent, an average ten-year advance, for all the counties of the country.

And the counties, in 1915, expended \$69,970,496, or 78.2 per cent more than



LORIN A. HANDLEY

President of the Board of Public Works, Los Angeles
First Vice-President League of California Municipalities

CITY.

The city receipts for 1915, including San Francisco, were \$68,724,578, an increase of 46.9 per cent in five years, as against a 99 per cent increase for all the cities in the country, from 1903 to 1913.

Expenditures by California cities, including San Francisco, for 1915 totaled \$69,922,592, an increase in five years of 59.5 per cent, compared with 101 per cent, average, for all this Nation's cities for the decade in question.

five years before, as against 95.2 per cent, average, for all the counties of the various States of the Union in the ten years from 1903 to 1913.

CALIFORNIA'S AVERAGE.

Summed up, taking California alone, her receipts, together with those of her counties and cities, increased in five years 60 per cent, while the combined expenditures increased 80 per cent.

The average of all the States for the

ten years running from 1903 to 1913, including their subdivisions, was, as to receipts, 93 per cent, and as to expenditures, nearly 101 per cent.

I am not endeavoring to make out a "good case" for California especially, but rather to show that conditions of which we in this State complain are general. Apparently we are better off than the average, but this is on a five-year showing for us as compared with a ten-year showing for all the others. Perhaps if we had complete county and city figures for the decade, California would not fare so well.

But that is not the question. Even the increases as shown here—State, county and city—are certainly heavy enough to cause grave concern, to warn us that we have drifted quite far enough, that the time has come for earnest thought, for the putting on of the brakes, for looking ahead. And so, with the basis laid, let us consider causes and remedies.

SCHOOLS, HOSPITALS AND PRISONS.

The support of our schools, our prisons and our hospitals constitute a heavy drain upon the people, whether considered from the point of view of the State, the counties or the cities. So, too, do our numerous elections.

I recall, while attending the National Tax Association Convention at Denver in 1914, hearing a delegate declare that our schools were costing far too much, that as good or better results could and should be secured with the expenditure of much less money, that those in charge of school finances as a rule, were not business men—practical men—however worthy in other ways, and so full value was by no means received for every dollar expended. Doubtless there was much truth in what the delegate stated. A like criticism might apply, also, to other departments of government. The central idea in this delegate's mind was that by temperament and training educators were not fitted to manage the fiscal affairs of the schools to the best advantage. But the people, I take it, would rather err in the matter of overcost than undercost where the education of the children of the country is at stake.

COST OF SCHOOLS.

We are spending in California approximately \$36,000,000 a year upon our schools, including the University, the normals, the common and the high schools; salaries of teachers, buildings, upkeep and so forth. This, upon an estimated population of 3,000,000, means a per capita for the State, counties and cities of \$12.00.

I have not the data for comparison with all the other States. The data available as to State governments is far from satisfactory. In 1915, for example, the State government of California contributed to the local communities for the support of the common and the high schools over \$5,000,000, while that of Massachusetts gave only \$204,879. It is simply a difference in system, the Eastern commonwealth throwing practically the entire burden of collection and distribution upon the local governments, while here a great part of the revenue is collected by the State and distributed to the schools. Accordingly, on a per capita basis, California would appear, upon a superficial showing, to be expending infinitely more than Massachusetts upon education.

IN FRONT RANK.

There is no doubt, however, that California is in the very front rank in the matter of expenditures for this purpose. Early in 1915, I had occasion to compare school disbursements by our State government, in 1913, with those of nine other States, two selected from the East, two (including California) from the West, two from the North, two from the South and two from the central group, the estimated population of each being approximately the same. California's per capita was \$2.99 as compared with an average for the ten States of \$1.90. Her percentage of cost as compared with her receipts was 38 per cent, yet this figure was exceeded by six of the other States.

I merely submit these figures and this data for consideration. Like the entire subject of expenditures, the school phase of it calls for thorough investigation before the passing of judgment. If disbursements are too heavy, we can not

hope to curtail them as they should be unless we know where the fault lies.

HOSPITAL AND PRISON COST.

The cost of our prisons, our reformatories, our hospitals and benevolent institutions also is a tremendous burden. I have taken the totals for the State, the counties and the cities, which under

and there is little incentive to induce them to return whence they came. So the result is, they become a burden upon California, and I think there is no manner of doubt that our percentage of cost for the care of these unfortunates is away above the average.

I am convinced from personal knowledge of the situation that our State hos-



FREDERICK C. ROBSON

Commissioner of Public Works, Berkeley
Second Vice-President League of California Municipalities

such classified headings as "Protection to Life and Property" include city fire departments also, and find that for 1915 they aggregated over \$26,000,000, or a per capita of nearly \$9.00.

California, from the prison and hospital point of view, is in a peculiar position. Facing the Pacific, she is, so far as our country is concerned, the "end of the world," the "jumping-off place." The mental and moral derelicts reach here and stop. They can go no further,

pitals are being economically conducted and I think, too, our State prisons. My opportunities of judging as to city and county hospitals and prisons have not been so good, but it is fair to presume, I think, that being so many in number and under such scattered authority they are not nearly so well in hand as are our State institutions of a similar character which are under centralized authority, close supervision and are fairly free of political entanglements.

ELECTIONS.

I have not had an opportunity to tabulate data as to the cost of elections, and for that matter such data as I have in my office is not complete. But all of us know that elections occur frequently, all of us know that it costs money to hold an election and it follows, therefore, that the total must be heavy. It seems to me that this phase of the expenditure situation offers a fine field for investigation and improvement.

I am not endeavoring, of course, to call your attention to the entire line of disbursements for various general purposes, but rather by selecting the more important to suggest that where expenditures are the heaviest perhaps will be found the best opportunities for retrenchment. I will take up, along that line, two other main topics—new functions and bonded indebtedness—before considering governmental efficiency from the standpoint of general and departmental management.

NEW FUNCTIONS.

There is no doubt that one cause which has contributed heavily to the increased cost of government is the assumption of new functions, particularly by many of the States and to a lesser extent by the National Government. But it is true, also, that while many of these functions have added, in the shape of taxes, to the people's burden, they have, at the same time, saved them in other ways as much and often far more than they cost. And beyond the dollar and cent point of view, must be considered what some of these functions do for the general good—the conservation of health and life, making the world more worth while for the men and the women who toil. All of which may be grouped under the heading "humanitarian legislation."

Are all of the various new functions necessary? Do all of them properly fall under governmental jurisdiction? Would it be possible to consolidate two or more under one control and thus reduce the overhead? Is the assumption of more and more new functions to continue indefinitely? These and similar questions must be considered. While

it is highly desirable to reduce the cost of government, it must not be done at the expense of efficiency or the minimization or elimination of functions which make for public welfare.

COST IS MORE THAN SAVED.

While our State Railroad Commission is not new in name, it is new in the scope of many of the functions it is discharging and particularly new in faithfulness to its duties. This commission, while expensive, undoubtedly has saved far more to the people of this State than it has cost them. And so, too, with the Board of Control, known before 1911 as the Board of Examiners. Its powers were very greatly enlarged with the change in name and to date it has performed a great public service, although not without much friction and some injustice, perhaps.

Many of the new functions—now realities—were mere suggestions ten or fifteen years ago and mere dreams before that time. There are, for example, the Social Insurance Commission, the Industrial Accident Commission, the Industrial Welfare Commission, the Immigration and Housing Commission, the Water Commission, the Rural Credits Commission, the State Market Commission, the Bureau of Labor Statistics, the State Children's Agents, the State Purchasing Department, the Legislative Counsel Bureau and so on and so forth.

These and similar functions have come to us in the past few years, and to a number of other States, also. It may be that we would do away with a few, if any, of them, but it is probable that a number of them, similar in purpose, could be consolidated. The opening invites entrance. And not only as to new functions, but, also as to several of the older ones. The suggestion, I think, is worth very serious consideration.

BONDED INDEBTEDNESS.

I approach the subject of bonded indebtedness with some trepidation. With others, I have uttered warnings against the habit of voting long-term, high-rate bonds for nearly any old purpose. I have advocated low-rate serial bond is-

sues, the life of which should not exceed and preferably should be shorter than the life of the contemplated improvement. I have never even suggested the complete cessation of bond issues, as has been intimated. Such a thing could not be. It would be impracticable. But we should confine bond issues to matters of the first importance, going meantime as far as is wise by direct taxation, and also bearing in mind that it is not up to us of this day and generation to complete the full development of the world or even our particular part of it.

THE GRAND TOTAL.

And that warnings were in order I think it only necessary to remind you that the total bonded indebtedness today of the State and the counties and cities exceeds \$250,000,000 and that the annual interest thereon is over \$10,000,000. Of this vast sum, the State's part is more than \$31,000,000, with \$15,000,000 worth of bonds on hand and unsold; the counties owe over \$92,000,000, and the cities nearly \$130,000,000. God only knows what the counties and cities hold to be sold later.

In the past five years, the bonded indebtedness of California, including counties and cities, has increased 285 per cent! Surely the time has come when we should "stop, look and listen"; surely the speed is such that we should put on the brakes!

This great bonded debt, plus the interest must be paid by taxation. Its staggering total is sufficient in itself to indicate how the taxpayer's burden has been increased by our reckless habit of voting bonds promiscuously. Nor is it really decreased by the statement that the State's portion will be paid by the corporations—from the State tax upon corporations. It is true the State will pay off its bonded debt by money collected from such a tax, but the corporations first collect the tax through increased rates and prices to the consumer.

GENERAL MANAGEMENT.

Now in the matter of general and departmental management, we all know that ever since civilized government be-

gan, incompetence, negligence, waste and, to a greater or less extent, dishonesty have existed and always will while human nature remains as it is. A proper system may force a dishonest person to be honest, a negligent person industrious and a wasteful person careful, but an incompetent person can not rise above a certain level, method or no method. He may be helped, but he can not be cured.

That the taxpayer's burden has been made much heavier by these four causes is too well known to require discussion. The issue is to ascertain how these causes can be minimized. We can not, of course, hope to eliminate them.

UNIFORM ACCOUNTING.

Uniform systems of accounting for the State, the counties and the cities will go a long way toward improving conditions. In California, the State government's accounting, bookkeeping and reporting are upon a uniform basis; the State Board of Control has begun this work in the counties, and in due time plans to give similar attention to the cities.

It is obvious, of course, that an efficient system of accounting for any political subdivision will prove beneficial to that community and equally obvious, I think, that where such a system prevails in all like subdivisions it will prove of general benefit, making it possible to work out comparisons as to the cost of government and other questions along related lines which will assist materially in the consideration of the problem of expenditures.

But the operation of uniform systems of accounting in our counties and cities, for example, carries with it, necessarily, the idea of a central authority which must have installed such systems and implies a continuance of such authority to see that the systems are maintained. And the only logical central authority for such a purpose under our forms of government is that of the State.

Naturally, at first, the subdivisions do not take kindly to this supervision, but in view of the great good that will result from uniform accounting and the fact that after such a system is once well

in operation the State may not be much in evidence. I do not think the opposition will be long lived. I believe, in fact, that there will be cordial co-operation between all concerned in due time.

THE BUDGET.

Not the least good that uniform accounting accomplishes is that it makes it easier to prepare a budget. I consider a budget one of the essentials in an orderly way of conducting public business, in gaining an intelligent conception as to receipts and expenditures, the source of the one and the distribution of the latter, and thus making it possible to prepare proper estimates and to check disbursements.

Not only can a budget system be utilized under any of our forms of political government—Nation, State, county or city—but it positively should be if the management of fiscal affairs is to be efficient. While it is true that the so-called scientific budget, which calls for a central and responsible financial authority, like a President or a Governor invested with special powers, is not particularly applicable to the average form of government in force in our counties or cities, still a budget system that will prove practicable and efficient is easy to outline and operate.

SCIENTIFIC BUDGET IMPRACTICABLE.

In fact, under neither our National nor our State form of government is the scientific budget workable to the full degree. But while financial authority can not be positively centralized with us and a "government"—to use the British phrase—made to stand or fall as its financial plan is adopted or rejected, it is practicable for us, nevertheless, to so arrange a fiscal program as to fairly well fix responsibility, show past disbursements, estimates of receipts for a certain period and approval in detail of proposed expenditures. Under such a system, particularly if due publicity be given the program, expenditures not only should be held within the revenue, but no legislative body is likely to materially alter the budget for the worse from the standpoint of the taxpayer.

A proper budget, backed by a uniform system of accounting and reporting, will go a very long way indeed toward solving the problem of growing public expenditures. It means a simple, orderly, public and effective way of doing business. Incompetency will have little chance to survive under such a system, negligence and dishonesty will be easily detected and therefore greatly minimized, waste reduced and efficiency established.

BUDGET AND BONDS.

There is one thing a budget can not do, however. It may discourage for a time at least the adoption of new functions, since expenditures should be kept within the tax revenue out of which such things are paid, but it can not prevent the people, who are supreme, from voting bonds. No system we may devise under our forms of government can stop the people from doing as they please when they make up their minds, or a majority of them do, that they want this or that done. But if due publicity be given to what the budget has to say about receipts and expenditures, it may have a deterrent effect upon bond issues. So even in this field the budget is of use.

EXPENDITURE LIMIT LAW.

In connection with uniform accounting, and a budget system, a tax rate limit, or more preferably, an expenditure limit law, to the effect that expenditures in any one year shall not exceed those of the year before by more than a certain percentage, should prove most effective.

It seems to me that after an intelligent study of existing conditions in any county or city shall have been made, and the situation outlined, following such an investigation, in order to prepare a basis, that with these three safeguards—uniform accounting, a budget and an expenditure limit law—the growth of the tax burden not only should be checked but kept under intelligent control from that time on.

THE STATE AND LIMIT LAWS.

The State, while easier to regulate in some respects, is not so amendable to an expenditure limit law as are the counties

and cities. These latter still tax general property and the rates are fixed by city trustees or county supervisors upon the assessment roll, but the State rates upon corporations are fixed by law. They cannot be changed by the Board of Equalization, which assesses the corporations, but only by the Legislature. So as these fixed rates are applied to the Board's assessments will the revenue be. Assessments can not be controlled by law. And in addition, the State has many important sources of revenue, such as that from inheritances or corporation licenses, that can not be limited.

Of course, notwithstanding, expenditures could be held down by only authorizing a certain percentage of increase for one year over the preceding. But it is better to limit revenue to correspond with proper expenditures, where it can be done. Still rather than have waste, it might be well to limit a State as well as a county or a city. Should a surplus then develop, either it could be expended by legislative act or acts for a proper purpose or purposes, or tax rates could be reduced so as to avoid the indefinite collection of more money than is legitimately required.

TAXATION.

Taxation, generally speaking, reflects expenditures. And the tax system in

effect is a matter of prime importance in the consideration of public expenditures. The basic purpose of taxation is to raise sufficient funds for the proper support of the government, but beyond that, and equally important from the standpoint of justice, the tax system in operation should distribute the burden proportionately, so that no citizen or class of citizens, or object of taxation or group of objects, should pay unduly.

We no more can expect to attain perfection in this respect than in anything else human. While we know there has been too great a growth in expenditures, still much of the complaint we hear may come from people who are carrying more of the burden than they should. So hand in hand with the study of public disbursements should go a study of tax systems. Not only should it be our aim to reduce the cost of government where found excessive, but we also should aim to see that this cost is distributed fairly among the taxpayers.

I thank you, gentlemen. (Applause.)

Chairman Robson: We will now proceed to the next subject, which is "The High Cost of Supplies to Municipalities," by Mr. J. F. Byxbee, Jr., City Engineer of Palo Alto. I am pleased to introduce to you Mr. Byxbee. (Applause.)

"THE HIGH COST OF SUPPLIES TO MUNICIPALITIES"

By J. F. BYXBEE, JR., City Engineer of Palo Alto.

Mr. Chairman and Gentlemen: Some time ago I wrote Mr. Sutton, the Chairman of this section, that I believed cities were paying entirely too much for their supplies. In reply Mr. Sutton suggested that it would be a good subject to bring before the League, with such facts as I could gather. In the short time at my disposal, I have not been able to accumulate much data, but hope we can get more light on the subject through discussion.

In figuring on a piece of work, it is quite easy to estimate the cost for labor. Wages are pretty well standardized, and from numerous records showing the

amount of labor required for any certain class of work, we are able to make a fair guess as to what this item of expense will be. On the other hand, in attempting to approximate the cost of supplies we are confronted with some difficulties. Material men seem to have no standard price and often favor private contractors with quotations lower than those given to municipalities on identical orders. Some time ago, while talking with a foundry man, he informed me it was the custom with the foundries in our locality, at least, to sell castings to cities at a price 15 per cent higher than that given to contractors. This

was with the idea of giving the contractor a certain advantage in bidding on city work, if the latter was inclined to do the work by force account. I believe a city should receive as low a bid for supplies as a contractor, and any advantage the contractor might have in competing with the city should be because of his knowledge and experience and better equipment. The additional 15 per cent remains a burden upon the city even when there is no competitive bidding between the city and contractor. For instance, if after a big contract is finished, there are some extensions to make that are too small to be done by contract, the 15 per cent additional is charged just the same.

A short time ago the City of Palo Alto asked for bids for doing certain street work. The specifications called for a five-inch concrete pavement with a thin oil-wearing surface and the cost was estimated at \$162,000. There were thirteen bids, eight of which were substantially below the estimate that I made, and the lowest bidder was about \$24,000 below it. Upon asking the successful bidder how he expected to do the work and come out without a loss, he replied that it was very easy to explain, because he could buy his materials cheaper than the city could buy them. He promised to let me see his quotations, but up to the present time I have not had the pleasure of reviewing them.

The City of Burlingame also let a contract for some street work this year, the estimated cost of which was about \$320,000. The lowest bidder was some \$75,000 below that estimate. The City Engineer of Burlingame attributes the low figure to very active competition, and also to an open specification. That may be true to a certain extent, but I believe it was more on account of the fact that the contractors could buy materials at lower prices than the City Engineer was able to figure on.

This condition makes it difficult for city engineers to figure accurately the cost of a piece of work, and such estimates as they do submit to the people are bound to be excessive and not to be depended upon for showing the true value of the work. It also makes it possible

for contractors, especially if they wish to work in harmony, as is sometimes the case, to submit figures somewhere near the engineer's estimates, with the result that the people are forced to pay more than the work is worth.

The cost of cement is particularly interesting. Palo Alto is quoted \$2.04 a barrel, whether we want to buy one earload or fifty earloads, and on concrete sand we are quoted 80 cents per ton. The State Highway Commission is building a short stretch of road near Redwood City, and for this work they are paying about \$1.60 per barrel for cement and 52½ cents per ton for sand. The highway engineers claim that the reason they get such low figures is because of the immense amount of work they have on hand. I am told from reliable sources that the actual cost of producing cement in this State is about 80 cents a barrel. Allowing a liberal freight charge to the main centers, and a very large selling profit, I do not see any reason why the price of cement should be more than \$1.50 per barrel delivered. We are paying too high for this material.

There is another way the city is forced sometimes to pay excessively for its supplies. Palo Alto at one time was securing very favorable prices upon its hardware materials purchased directly from a wholesaler in San Francisco. A local concern decided that it wanted our business, and thinking it could force us to pay for those things at retail prices, influenced this wholesaler, through some organization, to cease to deal with the city. It is all right to patronize home industry, but material men and merchants in any locality should be given to understand that the city is a large concern, and, being a big buyer, it should be given the very best market prices on all supplies.

This is a very important subject, and it occurs to me that the League, perhaps, in its present strength of organization, might do something to help cities get the very best prices on supplies, and prevent organizations or contractors from influencing manufacturers and wholesalers to discriminate against municipalities. (Applause.)

Chairman Robson: Is there any dis-

cussion of this question? There is a whole lot that can be said on both sides of this.

Trustee G. C. Gardner, of Napa: Do I understand Mr. Byxbee that the price of \$2.04 per barrel for cement is net, not allowing for return of cement sacks?

Mr. Byxbee: It is quoted at \$2.44, and we are allowed 40 cents for the sacks. So the \$2.04 is net.

Mr. Gardner: I understood you to say \$2.04.

Mr. Byxbee: Yes, that is the net price.

Mr. L. F. Barzellotti, City Engineer of Lodi: Mr. Chairman, it seems to me that as it is prescribed by law that when any material has got to be purchased beyond the limit of the dollar tax on the hundred, it must advertise for bids, that that would give plenty of chance to people to bid as low as possible, on each material. At least that is the experience of Lodi. If we want cement or sewer pipe, or whatever we want, we generally get very reasonable prices for it under that system.

Trustee A. E. Brock, of Redlands: It seems to me that the very thing that causes high prices is the thing the gentleman has just named. I notice in the report from the City Manager of Dayton, Ohio, that that was the least thing he had to contend with—that he could get an advantage of a good price if he went to the large manufacturers, without it being published. But the minute the price was published, they would keep to a certain standard that other manufacturers held their prices at. I think we have demonstrated that down our way. Mr. Hinckley, our engineer, has found he could buy much better by going directly to the people and getting a private bid, than by taking public bids.

Mr. Geo. W. Nickerson, of Albany: Doesn't the law compel you to advertise for anything over \$300?

Chairman Robson: Yes, in sixth class cities.

Mr. Brock: But you can buy in pieces.

Mr. George H. Freitas, City Engineer, Modesto: Under our charter, we are required for all material that costs over \$200 to advertise, and the way we get

away with the proposition of being overcharged, we advertise for bids, and if the bids don't suit us, we reject the bid, and then the engineer is authorized to go into the open market and make arrangements with the supply companies to get whatever he wants at the prices he can make. And I want to say, gentlemen, that it pays us to do it every time. With the pipe people, we advertised some five years ago for considerable sewer pipe, and had a peculiar experience. There was a land company that was promoting a section of territory within the corporate limits that had no buildings on, and they wanted to put in a sewer system. They agreed to put it in under the city's specifications, the city to reimburse them. They went into the market and got prices and discounts that beat our prices all to pieces on advertisement. That is what caused us to open our eyes and find that we could better our condition, get better prices, get better material, and more satisfactory deliveries, than we could by advertising for bids and awarding the contract to the lowest bidder. We made money, I say, by adopting that plan. Our charter allows us to reject all bids that we are not satisfied with, and also to reject all bids on contracts that relate to our water, sewer, street, or any other system. It has not only paid us, but paid us well to do it.

Trustee G. C. Gardner, of Napa: Napa's charter also has a provision regarding advertising for bids. Our minimum amount is \$300, and anything in excess of \$300 we have to advertise for bids upon. I recently had occasion to recommend to the Council to reject bids, and have gone into the open market and purchased castings for sewer work, at a discount of 65 per cent under the contract bid. It has been my experience that I can go right to the local merchants and buy cheaper than I can get prices on bids where the competition is supposed to be open.

Chairman Robson: There are two subjects that are not on the program that would be very interesting, and probably lead to considerable discussion, and as we have half an hour before we have to move to the theatre, we would like to

take those two matters up. For instance, in the City of Berkeley, our streets are rapidly going to pieces, that is, the type of street that was laid ten years ago, either waterbound or oil-bound macadam street, and particularly on our hills, of which we have a great many. The motor truck has brought a heavier and heavier load each year, and we find that this traffic is simply playing havoc with our streets. So, after a great deal of investigation with the State Highway Commission and with other cities, we passed a heavy traffic ordinance prohibiting the use of any street to any motor truck where the weight per square inch resting on the pavement would exceed 600 pounds. We had a lot of discussion about the limit of this load, and we placed it at 600 pounds per square inch, because we ascertained from the State Highway Commission that they were going to introduce a bill using the same figures. We have had more or less trouble with this, because that is a rather low figure. I think the matter has come to the attention of the municipalities in Southern California more or less, recently, and been investigated quite freely, and I understand that Mr. Brock, of Redlands, has something to say on that matter. We would be very glad to hear from him at this time.

Mr. A. E. Brock: Mr. Chairman, the movement in the South for uniform laws in regard to the weight and speed of trucks, and the indiscriminate use of trailers was started by the Supervisors of San Bernardino County. They had about finished building the new highways at a cost of one and three-quarters of a million dollars. They wanted to pass some regulations to protect the roads and found many different ordinances in effect in as many different counties.

A meeting was called in San Bernardino to discuss this matter. Those in attendance at this meeting were of the same opinion as the San Bernardino Supervisors. It was decided to broaden the scope of the meeting and invite representatives of the seven southern counties and representatives of the cities to a meeting to be held in Los Angeles. Invitations were sent out and the meet-

ing held. Supervisor Hinshaw was elected Chairman and Supervisor Hamilton of Riverside elected Secretary.

Every county and nearly all the cities of the south were represented. The matter of framing an ordinance covering the speed, weight, and any other provisions for the protection of the roads was discussed, with the idea that all of the seven counties and the cities should adopt the same. A difficulty appeared in the inability of the counties or cities passing laws in conflict with the State laws, as the State has a law governing the speed of motor drawn vehicles. However, it was found that the State Highway Commissions had presented a bill at the last session of the Legislature covering this matter, but the bill failed to pass. It was deemed wise to follow up this bill and try to have it passed this winter. A committee was appointed to draw up an ordinance with the aid of County Counsel Hill of Los Angeles, covering the provisions that the committee thought best to incorporate. The committee made the following recommendations:

That twelve tons be the maximum weight of any load, including the weight of the truck.

No iron wheel trailers be allowed to be drawn by any motor drawn vehicle.

One trailer only may be drawn by any truck and the weight of trailer shall not be over three and one-half tons. (I have taken this last provision up with several engineers and they think this weight is entirely too light.)

The weight on any tire shall not exceed 600 pounds per linear inch width of tire.

The weight on any one axle shall not exceed nine tons.

The width of any truck shall not exceed eight feet.

The committee made no recommendation as to the width of the load, although it was the opinion that such a provision should be inserted in the ordinance, but the committee could not agree on the matter.

All the ordinances that could be secured were in the hands of the committee and the Berkeley provision of 600 pounds to the inch was preferred to that

of Los Angeles, where the limit was 800 pounds to the inch.

I hope that the central and northern parts of the State will co-operate in this matter, as I know they will. The result will be a bill passed this winter by the Legislature covering this subject, and that we may have our roads protected from the ever-increasing weight of trucks.

Mr. Darling of Riverside, who is present, can tell you more about this subject than I possibly can.

I hope that this convention may be able to help in this matter.

Chairman Robson: I think that is a very, very wise suggestion. I don't know how general it is, but as I said before, Berkeley has found it is absolutely essential to pass some such measure, and I may say that, as Mr. Brock mentioned, these points, I think every one of them, are in our ordinance. I don't know that we have arrived at so fine a conclusion as limiting the weight to 12 tons, but we limited the width to 8 feet and 3 inches and the length to 50 feet, and limited the speed in accordance with certain characters of tires, and we also allow no iron-tired trailers, if they are over 1000 pounds, and I think the weight of the trailer we have now is 3 tons. We had a great deal of trouble with two or three trailers, turning corners and simply taking the pavement with them when they went around a corner. The second and third trailer simply cut into the street. Also, we were having very heavy construction at the University of California, and we had to give them a special permit, because some of the blocks of granite that they were carrying there of themselves weighed over 12 tons, and the street shows it. But I think it very, very wise and essential that this body this morning take some action endorsing the question of regulation of heavy traffic, and if someone will make a motion, or suggest that we bring it before the body in some way, the Chair will entertain it.

Mr. Topham: I would move that this Department report back to the convention a resolution recommending the limiting of the weight of trucks and the

width of load on the roads, and the speed.

Chairman Robson: I think it would be better to have a written resolution brought in, and at some future meeting have it written.

Mr. Topham: I thought we could just report this back to the convention and have them adopt it, and that somebody could write out a resolution that would be satisfactory.

Chairman Robson: Is there a second to Mr. Topham's motion?

Mr. Brock: I second the motion.

Chairman Robson: You have all heard the motion. Is there any further discussion of the matter?

Mr. G. S. Hinckley, City Engineer of Redlands: I would like to move to amend that motion, if it is in order, and have the resolution put in just the right shape before it goes in.

Chairman Robson: I think that would be better.

Mr. Topham: That is satisfactory, as long as we can have the matter acted upon.

Chairman Robson: With the sanction of Mr. Topham and Mr. Brock, we will consider the motion to be to appoint a committee of three to present a resolution at the next meeting of this body for endorsement. Are there any further remarks?

The motion carried unanimously.

Chairman Robson: I will appoint on that committee Mr. Topham, Mr. Brock, and Mr. Polk of Chico, and you are instructed, gentlemen, to bring in the necessary resolution. Is there any further discussion on the subject?

Mr. Brock: I just want to say that there has been no action taken in the South as yet. These committees have simply made recommendation. Mr. Chairman, how long has your ordinance been in effect in Berkeley, and have you ever found any benefit derived from it?

Chairman Robson: Yes, we have found very marked benefit. I would say, without absolute recollection, that it has been in effect probably six months. When we put it into effect, instead of giving thirty days' notice, we gave ninety days before it should take effect, and sent letters to all the users of heavy

trucks we knew of, informing them that the ordinance was going into effect, and to please make their trucks conform to it. They met us more than half way. Our greatest difficulty is with construction companies, building construction and material men who are taking loads to new buildings or new residences being built. They load up everything they can get on the truck. I also might say that we changed the weight. We have 600 pounds on streets having a grade of not more than 5 or 6 per cent, but when they get up to 10 or 12 per cent, we don't allow more than 300 pounds. In other words, on the hill streets, where the tractive force is so much greater, and where the tendency is to push everything behind the rear wheels, we have reduced the weight until it gets down to, as my memory is, 300 pounds to the square inch.

Mr. T. D. Allin, of Pasadena: We have had a little trouble with our oil macadam, applied during the winter months or in early spring. We all know that oil macadam is not absorbed until it has been made so by traffic. However, there are some parts where it has taken winter rains, and heavy trucks have come on in late winter and early spring, and in some cases as much as 13 tons following the truck, creating a certain resistance and causing us some trouble. We passed an ordinance allowing no width greater than 6 feet across upon any oil macadam street over 2 inches in depth, for a period of eight months. It is not necessary to have it for eight months, unless that street be plowed in the late fall. But if it be plowed in the late fall, we think to be safe such roads should be kept off for a period of eight months. We have found it necessary to do that.

Mr. Eric Wold, City Engineer of Burlingame: I don't think an ordinance of that kind should be exactly general. You take the average truck, and it weighs about five tons. If it is going to have any load at all, you are liable to abolish it from the roads. I know down the peninsula we have a lot of trouble with it. In fact, I have stopped a truck that had as much as 15,000 pounds per lineal inch of tire. But, it seems to me

that a regulation of that kind should be made to fit different streets,—a concrete street 800 pounds per lineal inch of tire, and an oil macadam streets and others in proportion. It looks to me as if there is just as much danger of overdoing it, that is, make your maximum load too light, as there is the other way.

Chairman Robson: Unfortunately you can't determine which way a man is going to go to get to a certain place. It may be that it would be impossible for a certain road to go to a certain place. When we first drew our ordinance, we had different weights for different kinds of streets, and we had our police force watch to see how such an ordinance would work out. It didn't work out at all, because he might start on one type of street, and then go into another street on another district, and then still another type of street in another district. And if he was going to strictly comply with that, he might have to do away with part of his load when he got into certain districts.

Mr. Wold: It does not seem exactly fair to make an ordinance to fit the weakest link of the chain.

Chairman Robson: We think 600 pounds to the square inch is reasonable.

Mr. Lynch: We had trouble at one time with an outfit bringing a 25 ton weight on a rock truck. They had that truck reinforced, and the wheels were only four inches in width. We stopped that truck, and now we have certain streets by ordinance made boulevards, and to go on those boulevards it is necessary to secure permits. If we have any question of doubt at all, we make them put the rock load upon regular house-moving trucks that have about four times the bearing surface that your ordinary truck has, and we have had no trouble at all with that. We took a load of this character and put it on house-moving trucks, and had no trouble in going over the weakest kind of construction, and you could not find where it went. I believe you can forestall a good deal of trouble that can be met with in that kind of a predicament, by simply requiring them to use something like that, and that would not prohibit them from bringing a load of any weight.

Chairman Robson: If there is no further discussion on this topic, I understand that Mr. Lewis, of Watsonville, has some ideas about removing bumps from roads, and if he is here and can tell us something about what he has done, we

would be glad to hear him for about fifteen minutes. At 11:15 we are to go to the theater and see a moving picture or lantern slide lecture on street lighting by Mr. Manahan, of Los Angeles. We will hear from Mr. Lewis.

SMOOTHING OUT WAVY STREETS

Mr. C. B. Lewis, of Watsonville: The matter of wavy or rolling streets referred to by our Mayor is, I believe, a very common occurrence with streets paved with the natural bitumen, and our main street is no exception to the rule, in fact it had become so bad that something had to be done, and we were hardly in a financial condition to repave it (the city pays one-third of the cost of all street paving). The street was paved some twelve or fifteen years ago with the natural bitumen on a water bound macadam base, after the macadam had been used for a few years and rendered smooth from the wear.

The paving soon began to crawl and, as I said before, got so bad that something had to be done.

About that time the supervisor of our road district, Mr. S. C. Marcus built a scarifier with the idea of smoothing up his roads. This scarifier was very heavy, four wheeled, with a long wheel base, and with an I beam frame so arranged that when any wheel should drop into a rut the beams on either side would act as sled runners and prevent the scarifier points from digging in.

There are twenty scarifier points set on a separate frame that can be raised or lowered at will.

Rendered somewhat desperate and reckless by the condition of our street and knowing full well that we couldn't do the street any harm even if we failed entirely, we conceived the idea of using the scarifier in a final effort to save it.

We put a set of chisel points on the scarifier and, selecting a spell of warm weather, we hooked it up to a steam roller and went to work. Of course, the work was new to us and absolutely experimental, and we had some trouble at the beginning, but soon got onto a working plan about as follows:

First the street was swept clean and

then sprayed over very lightly with a solution of distillate and crude oil; we found this to be necessary in order to get the chips to stick down again. This spraying was kept just ahead of the scarifier and traffic was not stopped.

Men with rakes followed the scarifier and raked the chips into the depressions where they were smoothed out by the steam roller as it pulled the scarifier back and forth. Of course we did not attempt to carve the lumps off at a single cut, as an attempt to do that would have torn the paving up in sheets and resulted in failure, but we set the chisel points so as to cut about one-half of the surface passed over; in other words we cut grooves through it and continued cutting grooves until the surface was covered. After the scarifying had been completed the street was still somewhat rough owing to the fact that the chips were of varying sizes and very hard to rake to a good grade. To overcome this we sprayed again with the 50-50 solution of distillate and crude oil, this time giving it a little heavier application. This acted as a solvent and softened the chips and the exposed parts of the bitumen. In this manner it was allowed to stand for a short time, after which a thin coat of granite rock screenings were spread over the street, and the steam roller again put on for a thorough rolling. These screenings were left on for a week or ten days after which the street was swept clean and found to be in practically the same condition as it was when first paved.

Examinations of the street while this work was in progress showed that there was practically no loss in material in the fifteen years of wear, and that the lumps or waves are caused by the paving sliding on the foundation.

Since this work was done I have heard of other cities using a similar process for

removing lumps from their paved streets, but in all cases that I have heard of they waste the chips. This material can all be saved by the foregoing process, but I would advise great care in using the distillate and crude oil solution, as a too heavy application of it would permanently soften the paving and ruin it. However, in our case the experiment was a complete success and saved our city many thousands of dollars.

I think that is all, Mr. Chairman, unless there are some questions.

Chairman Robson: I should be glad to hear something more about this, as I don't believe it will work for a refined asphalt as it will for a natural bitumen. I think all of us that are connected with cities using asphalt pavement realize that the traffic of today is certainly working it into waves more or less rapidly. We have a great deal of trouble of that kind in the city of Berkeley, and we have tried a good many methods to overcome it. We have some natural bitumen, laid there some twenty-six years ago, which is, I assume, the same material that Mr. Lewis speaks about, and which can be worked, because it seems to hold its life for much longer than the refined asphalt mixed with sand. But we have tried to cut off the lumps or bumps, in several ways, with the more modern type of sheet asphalt, and it has not been satisfactory—it still continues to roll, and you never can get it back in place. In fact, we have in several instances taken it up and put down a different mixture, in order to overcome the rolling. Is there anyone here from San Francisco? I would like to know what they consider the success has been with their method of doing the same work, that is, by heating the surface with an oil heater, and then rolling sand and rock into the street afterwards. I have not watched that carefully enough to know whether that has been successful, or not.

Mr. Lynch: Mr. Chairman, I believe the best way to cut out the bumps is to cut them out when you construct the road. It can not be done otherwise. There is Main street in Los Angeles, constructed by a contractor there that was under fire at the time, and the Council

was watching that street, which has been constructed nearly four years now and it has more traffic over it than most of the streets in the small cities would have in forty years. Though that street is handicapped with street car tracks in the center, causing concentration of traffic, it is still in good shape, and that is because the materials were selected with extreme care, and extreme care was used in the construction of the road. It is a sheet asphalt street. I believe when you get rolls started in your street, about the only successful way to overcome it is to reconstruct your street.

Mr. Lewis: That is my advice, get a street that does not roll. But the fact still remains that some of our cities have a great many streets that do roll, and we want to correct the trouble in the most effective and yet the cheapest way possible.

Mr. Lynch: Don't misunderstand me. I appreciate your position.

Mr. Lewis: I do want to say, however, that in all these roads, the cutting off of the top of the roll and remedying the situation as I have described does not prevent it from rolling again. It will roll again, and the only remedy is to go on with the scarifier from time to time, and dress them up, as they do roll. In the case of Watsonville, we had a street that, if we had been at the expense of taking it up and building it all over again, we would have had an expense of \$15,000 instead of \$400. With the \$400 we put it in the exact condition in which it was originally, and perhaps it is good for eight or ten years before it needs to be scarified again.

Mr. Robson: It is almost 11:15, gentlemen, and we will shortly have to conclude this discussion. I want to say that I think a great deal of trouble with our rolling pavements is that we, like all city officials, are trying to find a cheaper type of pavement that will be good, for less money. Formerly an asphalt pavement was never built without a binder. Now it has become the rare practice to use the binder, in fact, it is the usual thing to do away with the binder coat, and I am free to admit I don't think it is a good thing, and it is probably conducive to some of this rolling. The char-

acter of street that Mr. Lewis is speaking of is different from the modern type of street. In other words, he has built a street on a macadam base, whereas the type Mr. Lynch speaks of is built on a concrete base.

Mr. Lynch: It is standard pavement, five inch concrete base and a two inch binder and two inch sheet pavement.

Chairman Robson: I think you will find that it is almost universal that the streets that are waving are streets laid without binding. If the property owners want to lay a street at a cheaper first cost, and pay for it afterwards, it is their privilege. But almost all our trouble in Berkeley has been caused by a cheap pavement laid without binding, and trying to get something for nothing, which cannot be done.

The Department then adjourned, to reconvene immediately at the theater.

WEDNESDAY, OCTOBER 11, 1916

Short Meeting of the Department of Engineers, Councilmen and Street Superintendents, and the Department of Public Health.

President Allen H. Wright in the chair.

The President: Yesterday afternoon we were to take up the matter of the compensation act, but the representatives of that Department of our State government were not here. Today we have two of the officials connected with the State Compensation and Industrial Accident Board, and at this time we will hear from Mr. Christopher M. Bradley, attorney of the Industrial Accident Commission. I have pleasure in introducing him to you. (Applause.)

ADDRESS BY CHRISTOPHER M. BRADLEY, ESQ.

Attorney for the Industrial Accident Commission.

Mr. Chairman, Delegates to the League of California Municipalities, Ladies and Gentlemen:—Last year at Del Monte I had the distinguished privilege of meeting with the Section of City Attorneys and conferring and advising with them, with particular reference to questions arising under the Workmen's Compensation, Insurance, and Safety Act, and with more particular reference to the street improvement acts under which the cities are at present working. I do not know whether, being privileged now to address the delegates, I have been promoted or reduced to the ranks—I will have to leave that to you.

I feel that I am sailing in a more or less uncharted sea, for the reason that I had no assignment on the program, no subject to which I was to direct my particular attention. Talking to Mr. Locke about a month ago, he said I would be expected to discuss some of the cases in which we had encountered trouble, and I told him we had had no trouble.

There have been various matters in which cities and counties have been interested coming before the Industrial

Accident Commission for decision. Those cases are cases, of course, in which the parties to the dispute are deeply interested, and in which, as administrators of the law, the Industrial Accident Commission has been, of course, interested as arbitrators, but otherwise not interested. When you have a lawsuit or controversy pending before a court or an administrative tribunal, you all know that both sides cannot win. The side that loses has that familiar and ancient right of cursing the court. In that way, we may have troubles which we know nothing about.

As I said, there have been a number of cases come before the Industrial Accident Commission involving matters of public interest, concerning municipalities. By way of illustration, I can best entertain you and give an idea of how this law works, first stating, by way of preface, that the law works in the case of a municipality in precisely the same way that it is administered in any other case. Given a basis of facts which calls for the operation of the law, there is no difference in the treatment of the par-

ties,—in the nature of things there cannot be. There are problems of insurance I shall not discuss, because Mr. Fellows, the manager of the State Compensation Insurance Fund, is here, and if you have any questions to propound, he is thick-skinned, not easily offended, and abundantly able to answer them.

There was a case arising at San Anselmo which I recall, the case of an employe in the Marshal's office, or in the police department. His duties were largely office duties. Incident to his duties was that of looking after the city street lights, to see that the lighting system was properly checked up, and that the city did not pay for any light that it did not burn. One evening, I have forgotten the exact hour, but early in the evening, he got on his motorcycle to go home. Of course, he observed the lights in the only way a man can observe lights, and that is to get out on the street and go along the street. It appears further that he was a newly married man. The facts first came to my attention through Mr. Locke. The statement was made to me that the young man who was injured was on the way home to see his bride. He suffered a very severe injury. It was also said that, while he was going home to see his bride, he was likewise observing the street lights—a divided attention. It was insisted that there was a street light out of commission, a block off the direct route from his office to his home. He was injured while going along the direct route from his office to his home. The question came up there as to whether he was to be paid compensation under this law as for an injury arising out of his employment and connected with his employment. The advice to Mr. Locke from my office was that he was not entitled to anything. However, as usual, I told him that if he had any doubt about it, or the injured man had any doubt about it, that it could be submitted to the Industrial Accident Commission for determination. It was. The Industrial Accident Commission, without consulting my office about it, sustained the advice that I had given to the parties litigant, for the reason that the young man who was injured was on the way home, between his office

and his home, that at that time he was not inspecting or investigating lights, notwithstanding the fact that it was during the hours when it might be said he was under employment, it being contended on the part of the claimant that an officer of that kind was always on duty. But he himself testified, and the case turned largely upon the testimony he gave, that he was on the way home to see his bride. That was not an industrial accident for which a city should be required to pay indemnity, in my judgment, and was so decided by the Commission.

Another case arose in Gallup. The Police Judge, a practicing attorney, was on his way from the office to the city hall, having in his pocket certain papers and records in connection with duties which he was to perform when he got to the city hall. In crossing the street, he was struck by an automobile, and made claim for indemnity under this law, and the claim was refused. He was on his way from the office to the police court. He was not performing any duty at that time. He had a free choice of routes, and he was exposed to no other peril than any person walking along the street, a common risk, a common peril, therefore not connected essentially with the performance of his duties.

An interesting case has recently come to the attention of the Commission from Mono County. Sheriff Dolan of that county lost his life while in the performance of his duties, leaving a widow and three or four small children, practically destitute, as is our information. The indemnity under this law would be the maximum indemnity of \$5000. They asked our office about it for advice, and we considered that the indemnity should be paid. However, its payment was resisted on the ground that an officer was not an employe. Admitting that all the existing conditions precedent for fixing this liability concurred, the claim was resisted on the ground that the sheriff was not an employe. The matter came to the Industrial Accident Commission, and after a thorough hearing and record made on it, they awarded the widow and minor children the sum of \$5000. The matter has been appealed to the Supreme

Court and is now on appeal, the question being whether or not an elected officer is an employe. I am going to allow you to decide that for yourselves. I have an idea how it ought to be decided.

In Redwood City, they have an officer—and I am not stating these facts in any detail, you understand, but simply referring to them as a matter of interest in such cases as have arisen,—who is engaged privately in conducting an electrical shop,—he is an electrical contractor on perhaps a modest scale, and that is his business. He is also a city official, I think superintendent of streets. At any rate, one of the incidents of the duties of his office is to look after the Gamewell fire alarm system, and it is his duty and his habit every day to go at an early hour of the morning to investigate the place where the Gamewell system is located, and to look after the detail of it, to see that the system is in good working order. On the day on which he suffered a very severe injury, he took a crew of men whom he had employed for his private business. He went to his shop first, and took a small force of men in his automobile to the place where he had a private contract, incident to his private business, instructed them to the work they were to do, and left them to do the work, and then proceeded from the location where he was doing this private work. On his way, he collided with another man, or something of the kind, and suffered a rather severe injury or shaking up. He had not yet reached the city hall, but he was on his way there, and that was where he had to go. The matter came to my attention, and after going over it very carefully, I did not think there was any liability. But the Commission was disposed to disagree with me. After threshing the matter over very thoroughly, it was found that there was sufficient there to carry liability. Redwood City, as I recall it, carried insurance with the State Insurance Department, and the claim was paid. To my mind, that is a very, very close case. My idea was that the superintendent of streets had gone to his shop and taken a crew of men and started at his own private business that morning, and I think then started for the city hall.

And, though I have been ruled against, it seems to me the rational thought in this connection is that this man was not there to work, and that is all there is to it. But there is this to be said about a case of that kind: That he was an officer at all times, and furthermore, being a superintendent of streets, as he went along the streets, it was his duty to look after the streets, and therefore it took away the argument that he was on his way to work, because as superintendent of streets he was engaged at all times in the performance of some duty when on the streets, and might be called upon to perform a duty of a particular kind as he went along the street. Furthermore it was said that, as superintendent of streets, he used the streets more than an ordinary person,—that it was in the line of his business. That fortifies the case considerably, and yet in the aspect of his being an official and not a mere employe, the same question arises there that arose in the other case I gave you. These cases illustrate how very slender is the line dividing liability and non-liability under this act, not only in the cases of public officials, but in all cases where people are going to and from and required to go to and from work as a part of their duty.

I think that one of the most interesting cases we have had is the case that arose in the City of San Jose. Am I exceeding my time, Mr. Chairman?

The President: I don't know just how long it is.

Mr. Bradley: I will take but a moment longer. To me this is the most interesting case I have had arising out of the possible liability of a city. They had in San Jose a system of street sweepers, and they also have an ordinance empowering the City Council to designate the city employes. The City Council had designated specifically by name and number the street sweepers who were to perform that public duty, keeping the streets clean, under the direction of the superintendent of streets. One of the street sweepers had to leave town quickly, on account of illness of his mother. It was necessary to get somebody to take his place. The matter came to the superintendent of

streets, and they got a man who had been employed before as a suitable street sweeper. But the resolution of the Council did not name him as such. At this time, the man, cleaning the streets, developed a blister, or something of that kind, from using the broom, and in the course of a few days he had to go to the hospital, and in a few days thereafter he died with a very bad case of blood poisoning. The autopsy also developed that he was suffering from a chronic disease known as colitis. His widow made claim against the City of San Jose for a death benefit amounting to \$2250, being three times the man's annual earnings. The matter was exhaustively litigated before the Commission, and the Commission came to the conclusion that she was entitled to it and awarded it to her. The matter was taken up to the Supreme Court. After it had been there for some few months, a proposition for settlement was made. In the meantime I think the city had come under the city manager plan—I don't know where the proposition emanated from, but the proposition for settlement was entertained, and the case will not be decided by the Supreme Court. It was settled on the basis of the payment of one-half of the award.

There are a dozen intricate legal propositions involved in that sort of a case. In the first place, was the getting a blister on his hand an accident? At that time the compensation law required that there should be an accident, not an injury, as now. There is, of course, a vast difference between the two. You may have injuries without accidents. The question was whether the getting of the blister was an accident, and that was the most important one. Second, whether this man was employed by the city at all, or whether he was employed by the street sweeper who had to go away, as a substitute. He was paid by receiving the pay of the absent street sweeper, and the absent street sweeper actually paid his directly. There were very many important questions in that case, which will not now, unfortunately, be construed by the Supreme Court, by reason of the compromise settlement. In my opinion, it was just about a fifty-fifty lawsuit, and the better way is to

settle a matter of that kind by a compromise, so far as the parties litigant are concerned, and therefore I think it was wise, in that aspect of it, to settle this case. Three commissioners decided that it was a good case, and that means something.

I will not take your further time, unless there are some questions that I can briefly answer for you with reference to the administration of this act.

The Secretary: May I state another case that is in process of settlement, rather unique. A certain town was engaged in cleaning its septic tank, and an employe, during the process of cleaning the tank, standing above a manhole, which was open, lit his cigarette and dropped a match into the tank, that is, it was supposed to go down into the tank, but it didn't get there, it started the gas going and instantly it blew the top off the tank and resulted in serious injuries to the man.

Mr. Bradley: That is a real case and is being litigated?

The Secretary: I don't think it has been brought to their attention. Liability is disputed.

Mr. Bradley: I should shrink from deciding that in advance. But, Mr. Mason, I could answer that with some precedents. The House of Lords in England held that an ordinary workman who was driving a water wagon, sprinkling the streets, and smoking his pipe, sitting on the high seat of the wagon, and who dropped his pipe, and was going down to get it, and stepped on the wheel and slipped on account of the wet wheel and broke his leg, was entitled to compensation. It was a natural thing for him, a British workman, to smoke a pipe while he was at work, the court held, and consequently he was awarded compensation.

The Secretary: I haven't the nationality of this particular workman.

Mr. Bradley: It was an accident that he dropped the pipe, and he had a perfect right to go down and get it, the court said. There was another case of a carter,—they call them "carters" in England—where one of them got down off his cart and stepped across the street to get a glass of ale. The Court of Appeal in England held that it was so much

the custom of carters and people in that class of employment (they classify them over there) to take refreshment, that in going over to get the glass of ale, when he was struck by a passing vehicle and lost his life, as I remember it, that his widow should be paid compensation. Now, those are two pretty fair precedents to indicate to you what the answer would be in the case you put. It was his duty to be there, as I understand, and while it was not his duty to light a cigarette, yet was it a reasonable thing for him to do.

The Secretary: Wasn't he supposed to know the probable effect that would flow from his act?

Mr. Bradley: We don't talk about negligence any more. This law of ours operates without reference to negligence. You have but one question there, to my mind, if you are going to be governed by these precedents. That is to say, under these cases there is but one question, and that is this: It is a defense to a claim under this statute that a man is guilty of what is known as willful misconduct. That is the language of the statute. Say he was a man of experience who had been doing that kind of work for a long time, that he knew there was gas there, that he knew it was heavily charged with gas, being an experienced workman in that kind of work, and that he knew it would be thus dangerous, and that he deliberately, knowing all those things, breached a rule, or a rule was violated, a well known rule of conduct, in doing what he did do,—under those circumstances he might be charged with willful misconduct, and therefore entitled to nothing. I think if we are to be governed by the English cases, as I state them to you, that would be the only available defense in the case you put.

The Secretary: I was going to ask you in that connection this question: whether or not the State insurance fund would cover an employment of that kind. He was employed simply for that specific purpose. The risk to the town employees generally was carried under State insurance.

Mr. Bradley: There is absolutely no doubt about it, that it would cover that

kind of employment. There are two phases there. You say he was just employed incidentally for that one piece of work? The defense might be made that the work was casual and not in the usual course of the city's business.

The Secretary: Yes.

Mr. Bradley: This law does not give any indemnity when both elements are present. But both must be present to exclude compensation. Now, as you put it to me, that employment was casual employment,—it was not regular. It may be said to be casual, but there are half a dozen American cases that hold that while a city is not engaged in what might be termed business, in conducting business or public activities, it would seem if it is to be identified as a public activity, which this is, that would be tantamount to the regular business of the city, and liability would be fixed. I want to say that the State has never taken a case to the courts. And those cases which are in process of adjustment in the State insurance, necessarily if they are so close as to not make it fairly susceptible of adjustment on what might be a proper basis, are advised to be taken to the Industrial Accident Commission. If the foundation for liability is there, it pays. It has never appealed a case to the Appellate Court, but it has a perfect right to do so.

Mr. T. S. Snyder, City Clerk, Santa Rosa: Did I understand you to state that elective officers may not be employees of the city?

Mr. Bradley: I think I understood your question, and if I did not, you may correct me as I go along. This is the second compensation law enacted in this State. The first one was what was known as the elective law of 1911. In that law, elective officers were excluded by express provision. In 1913, the present compensation law, the compulsory law, which fixes the liability whether you want it to be fixed or not, was enacted, and it does not contain any such exception. This is the language in Section 15 of the law, in effect: "The term employer as used in Sections 12 to 35 inclusive of this Act shall be construed to mean the State and each county, city and county, city, school district, and all public

corporations." Now, the great weight of authority in all jurisdictions is that an officer, an elective officer or an appointive officer, is not a public employee. That is the weight of authority everywhere. The gentleman who propounded the question is probably familiar with that. But that the salary is attached to the office to enable the man holding the office to perform the duty, is the holding. In other words, he is not an employee but he is an officer in charge of a public trust, and that the salary is not his at all, but it is attached to the office so as to enable him to perform his duties and live and do whatever is requisite for the purpose of performing a public trust—nothing more and nothing less. But there is no exclusion in this law, as there was in the first law, and there is enough there to take the case to the court for decision as to whether this law covers it. An elective officer or appointive officer who has a salary would probably never claim indemnity under this law, because, his salary being attached to the office, as soon as he was able to perform the duty, it would go on again—unless his injury was of such a character as to wholly disable him from the performance of his duties. But in the event he loses his life, of course, the salary does not go on, and his dependents should be taken care of if this statute is to be literally construed, as its very terms say it should be, and the case should be covered. The quick advice in the Mono County case, going from my office to the State fund—the Dolan case—would be to pay, because I think, as I have explained this statute and the one that went before, and the law bearing upon it, there is sufficient legal ground for honoring that claim. I am not criticising the officials of that county at all. I think they did right to question this. It must be decided by a court. I am not a court, the Commission is an administrative body, and the Legislature has fixed this liability and defined it. So Mono County is right to contest this question. Any municipality would have been right to test it. So I repeat that it is not criticism of the county at all. And exactly the same as to the municipality, San Jose, in the street

sweeper case—they denied the liability. The matter has to be adjudicated or settled. The City of San Jose, I repeat, was right to deny the liability. It is a very close case.

City Attorney C. H. McCaughy, of Fort Bragg: The decision of the Supreme Court means the cancellation of all municipal insurance, doesn't it?

Mr. Bradley: No. Municipal bodies have vast bodies of employees who are not officers. A street sweeper is not an officer. The man hauling gravel is not an officer. Cities employ a tremendous number of people who are not officers. Your codes define who an officer is. Counties engaged in road work employ a great many, and the State of California employs a tremendous number of people.

Mr. McCaughy: That would exclude city attorneys and city clerks, and so on?

Mr. Bradley: I am afraid you could not collect under this law, if you were hurt—if the Supreme Court decides it that way. I hope to be able to convince them and have them decide it the other way. I think a city official or any other official, especially in view of the salaries paid, who loses his life while in the performance of public duty and because of the performance of public duty, is entitled to this indemnity just the same as any laboring man or anybody else who gives his life to his engagement.

The Secretary: What is the attitude of the Commission in regard to a voluntary fire department?

Mr. Bradley: That is a troublesome question, Mr. Mason. I am slow to indicate the attitude of the Industrial Accident Commission about any case in advance. They don't always agree with me.

The Secretary: I did not know but what they had assumed some attitude in regard to it.

Mr. Bradley: There has not been, that I can recall offhand, any decision with reference to volunteer firemen. You are talking about a statutory volunteer fireman under the general laws of the State of California, who gets no salary?

The Secretary: Yes.

Mr. Bradley: Purely a volunteer organization?

The Secretary: Yes.

Mr. Bradley: I will indicate to you what has been the attitude of the Commission in regard to a similar matter. One of the first questions that came up was this: that a man receiving no salary, and compensation being measured by the pay one receives, there is nothing upon which to compute compensation. But the law also provides that a man is entitled to medical, surgical, and hospital attendance, which very often exceeds compensation. And the Commission has ruled uniformly, and will continue until it is upset by the court, that a volunteer fireman is entitled to that full service. Furthermore, if he receives anything for his services, and some of them do for attending fires, then the fact that there is a minimum in the statute of \$333.33 per annum should be taken to measure what he is entitled to. The law says you cannot pay a man less than that. The Legislature has measured the minimum. So if there is any increment or return to the man for his service, he is presumed to be paid on that basis, and if he is injured in the performance of his duty, that will be the basis used. That is about as far as you can go on that.

Mr. G. F. Leckner, City Clerk of Tulare: In regard to the matter of compensation for a city clerk, do I understand from what you have said, that if he is injured, he would not be entitled to compensation other than hospital expenses and such as that?

Mr. Bradley: No, you do not understand me. That is a litigated question in the Dolan case, where the sheriff of Mono County was killed. Identically the same law would apply to a city clerk as an elective officer.

Mr. Leckner: What I want to say is, they are collecting premium upon that assumption.

Mr. Bradley: Who is?

Mr. Leckner: The compensation insurance fund.

Mr. Bradley: Yes, and if you have your city clerk killed, the State Compensation Fund would pay it, because if there is a contested claim under that

fund, the Commission decides it. In other words, if the State fund had been holding insurance for Mono County, notwithstanding that this was an elective officer, it would have paid promptly the award of the Commission. I doubt whether there would have even been any proceeding before the Commission, because the State fund would have put that question before me, and I would say to them, based on the grounds that I mentioned to you a moment ago, and on the condition of the statute prior to the time when this one was enacted, that the payment of that claim is legally justified. Furthermore, I should say that the claim should be paid because the premium to cover the specific office has been paid.

The Secretary: In regard to a volunteer fireman, you generally consider that they are not entitled to any damage for compensation, but are to recover hospital fees and medical attendance?

Mr. Bradley: That is about as far as you can go. If he receives nothing whatever, you have nothing on which to base compensation. If he receives anything at all, as I said before, you can use the minimum. It is a good deal like a volunteer anything else. But of course, so long as it is public service, it should be compensated as far as you can get the measure for compensation, and that is as far as we can get under this law.

The President: Are there any more questions to be asked of Mr. Bradley?

President H. A. Hopkins, of the Board of Trustees of Taft: What would you consider a volunteer fireman's working hours? Suppose you have a volunteer fireman, and he runs to a fire.

Mr. Bradley: His working hours are indefinite. It is not important, at any rate. His working hours would be from the time he got the notice or alarm for the fire and went out to it. His working hours would not be 24 hours a day, if that is what you mean. They could not be. It is like the case Mr. Mason put a while ago, of a fellow doing a casual job — it is not regular. Fires are accidental — or incidental. They do occur, but you might run a year or two years without a fire in your town. That, however, would make no difference in the measure

of compensation, if the man had only been working an hour, and suppose he was getting three dollars a day, that would be \$900 a year, and in the event of his death \$2700 would be the amount his widow would get.

Mr. Rutherford: Take a case of this kind: A city contracts with a contractor to perform certain public service upon the streets, and in that contract requires the contractor to furnish two or more men to assist the city in performing a certain part of the contract which the city has agreed to do at a particular price. Are the two or three or more men who are furnished by the contractor employed by the city, at the time they are working city employes on the contract which the city has to do at a certain price?

Mr. Bradley: Which the city has agreed to do, do I understand you?

Mr. Rutherford: The city has agreed to perform a certain part of the contract at a particular price. I will explain the proposition. The City of Napa owns an oil sprinkling apparatus. The contractors of Napa do not own such an apparatus. In our street contracts, we agree with the contractor that we will perform the work for a particular price, say \$600 for a certain street, on condition that the contractor shall furnish two or more men for spreading the screenings over the oil during the course of the work to be done by the city. Are those men who are spreading the screenings employes of the city or of the contractor?

Mr. Bradley: I think they are employes of the contractor, clearly. The city would not be liable for their injury, if I have got your question clearly. It is rather criss-cross and complex as it comes to me, but if I understand your question, the men employed in sprinkling would not be city employes.

Mr. Rutherford: Yes, the men are city employes. One is the engineer of the sprinkling wagon, and the other man is the fellow who drives the machine that runs that.

Mr. Bradley: You have too many men on that work in the first place.

Mr. Rutherford: But in the performance of this work they are city employes,

there is no question about that. Now, these men were sprinkling the screenings behind that wagon, and they are men furnished by the city under this contract, with the contractors, but the salaries of those men who are so spreading screenings are paid by the contractor and not paid by the city.

Mr. Bradley: What's your idea about it?

Mr. Rutherford: My theory is that they are not city employes.

Mr. Bradley: It depends on who entered into the contract of hire with them, and who pays them their wages, and who has the right to discharge them, and who has the right to control them. You know as a lawyer that that is what makes out a contract of hiring.

Mr. Rutherford: But we have a complex situation there—we have the right, as a city, to fire them if we don't like them, and tell the contractor to furnish more men.

Mr. Bradley: And who has control of those men and the right to discharge them?

Mr. Rutherford: We have while they are spreading the screenings—they are working for the city, and if they do not do it properly, we fire them and tell him to furnish more. He pays them, however—we don't.

Mr. Bradley: The courts have held generally that the power to discharge is the power to control, and that actual control, that is, bossing about the incidents of work, is not the thing. The power to discharge makes it more clearly a contract of hiring, and makes out the relation or status of employer and employe more than any other single element. Under that, although you have other elements that might vary it, I think the city would be held to be the employer.

Mr. Rutherford: The city would have the right to tell those men they could not perform those duties any longer, but the city does not pay them any wages.

Mr. Bradley: That is not a very material thing. Our own Supreme Court has held that the direct payment of wages is not even a strong element in determining the question. Take this street sweeper case. The substitute street sweeper was not hired by the regular

street sweeper, in my judgment. The regular street sweeper did pay him, but he got the money to pay him from the city, and was a mere conduit. Now, you may have a case, if you elaborate your case a little, like this: Does the city have the power to fire the man direct, or would the city have to go to the contractor and tell the contractor that his services were not satisfactory and that he, the contractor, must fire them and get other men—in your case?

Mr. Rutherford: There is no question but what the foreman of the street department, the city engineer, would have a right to tell them they were not needed any longer.

Mr. Bradley: I am inclined to think the city would get in a bad box if any of them were to get hurt.

Mr. Rutherford: But we don't hire them or pay them.

Mr. Bradley: You substantially do hire them. You control their hiring and have the power to discharge, and those are the two big elements to determine their status. I think they would be city employes, if I have your plan of working in mind properly.

Mr. Doughty, of Lordsburg: The street superintendent is hired at a salary of \$100 a month. He is also appointed temporarily but indefinitely as City Marshal, and he is paying premium under the highest hazard, that is, the City Marshal. If he should be injured and killed during the time he is not in service as street superintendent, but as City Marshal, would he come under the head of the full salary of \$100 a month?

Mr. Bradley: Yes. Our statutes say that by law you may impose additional duties, without additional compensation, upon a public officer. You have a street sweeper, and you have some kind of legislation saying he shall perform additional duties for no increased compensation. His salary or pay as a public servant is \$100 a month, and it makes no difference whether he is injured or killed while performing his duty as marshal or street sweeper. His compensation would be calculated under this law on the basis of \$100 a month.

Mr. Locke: A town marshal is required, among other duties, to patrol

the town. In patrolling the town, he also carries a message for some citizen. While doing that, he is injured. Has he been injured in the course of his employment, or in performing a private duty?

Mr. Bradley: We might cite hypothetical cases all day. I am inclined to think that the man has departed from his employment as a public official, and he is doing that which he is not entitled to do—he is using the city's time, perhaps the city motorcycle, and departed from his employment as a city official or as a public official—he has breached his duty as such, therefore he does not come within one of the conditions prescribed by this law. A man must be injured in the course of his employment, and I think the man in the case you suppose stepped outside of his employment.

Mr. Locke: Another question, Mr. Bradley, and this is a question that has been put up to me—it was given to me as the result of the decision in the San Anselmo case. Suppose, as in one case that I know, a town marshal is required by resolution of the board of trustees, to have a telephone in his house and answer telephone calls at any hour of the night. Suppose the telephone bell rings in the middle of the night, and in getting up to answer the phone, assuming it is a call to some public duty, he stumbles over a chair and breaks his arm. What is the liability in that case?

Mr. Bradley: That is an easy one. I am assuming that Mr. Locke has given me all the facts. I think he would be entitled to compensation. The presumption is that he is required to have that telephone in his house as an incident to the performance of his public duty. A call comes which it is assumed is a call to public duty, and in determining to answer that call immediately, he suffers an injury. I would not be the man to decide it, except primarily—it might be a disputed case, and it might be brought before the Commission. If it came to Mr. Fellows, as a matter of State compensation, and they referred it to me, and there were no other facts than those Mr. Locke gave me, I would tell them to pay it, because I think that is the performance of a public duty, arising out of and incidental to it, and the man

should have the right to recover, even though it happened in his own home where he had complete control of his physical surroundings.

Mr. Rutherford: Merely by way of a facetious remark, if a man broke his arm in endeavoring to reach the telephone, he would have a very difficult time proving it was public duty.

Mr. Bradley: I wondered whether Mr. Locke had given me all the facts. That is possible. The point is, though, seriously, that by breaking his arm, he is disabled from performing any public duty, and therefore entitled to indemnity.

The President: Are there any further questions to be asked of Mr. Bradley, or shall we go on to Mr. Fellows' side of the story, that is, the Compensation Fund?

City Clerk Edward F. Halbert, of Porterville: In regard to the contract

proposition back there, which caused quite a little discussion, suppose the contractor did not have anything else, and was not worth the amount of liability, wouldn't the city be liable anyhow?

Mr. Bradley: You are assuming that they are employees of the contractor?

Mr. Halbert: Yes.

Mr. Bradley: The Supreme Court has said that it is not competent for the Industrial Accident Commission, under the power conferred upon it by the Legislature, to decide anything except where the immediate relation exists of employer and employee. But this law fixes a liability such as you describe. It cannot be enforced through the Industrial Accident Commission, but the Court has not held that the obligation is invalid. So it has to be enforced through the courts, and until the courts hold that the obligation is not proper, I would answer your question in the affirmative, that the city is liable.

LEAGUE OF WASHINGTON MUNICIPALITIES

The Seventh Annual Convention of the League of Washington Municipalities, held in Everett from October 12-14, 1916, proved the best attended and most successful meeting in the history of the League, all first and second and the larger third and fourth class cities of the State being represented.

The principal feature was the first Washington conference on City Planning held in connection therewith. Besides carefully prepared papers on the various phases of city planning by eminent authorities in their respective professions—engineers, architects and city attorneys—there was more illuminating discussion from the floor by delegates attending than is usual at meetings of this kind.

Other important timely discussions which engaged the attention of the Convention related to civil service classifica-

tion and grading, and to problems and practical procedure in the preparation of local assessment rolls.

In the various section conferences and committee meetings, working early and late on problems of more technical and professional nature, important results were accomplished, culminating in resolutions adopted by the League or referred to appropriate committees for practical action or further investigation, as the case may require.

COMMITTEE REPORTS.

The report from the treasurers, controllers and clerks section, recommending sundry amendments to State laws dealing with elections, condemnation assessments and other matters affecting their official duties, was referred to the Legislative committee.

The report from the Civil Service committee included a proposed legislative

bill. The committee however, for reasons stated, did not recommend its submission for action by the next Legislature. The committee was continued for the purpose of further investigation, with instructions to report on a later occasion.

The report from the committee on Third and Fourth class cities included two legislative measures, one amending the commission government law so as to improve its working in cities operating public utilities. The other bill provides several optional forms of government for the smaller cities. This committee also was continued, to give opportunity for re-drafting the bill providing for a city manager under the direction of a larger council.

Through the coming year the work of the League and its various committees will be devoted largely to questions of municipal finance, and that doubtless will also be the leading topic at next year's convention, which will be held in Tacoma at a time to be later determined.

PROCEEDINGS PUBLISHED.

The papers prepared for the Convention, with discussions thereon and other proceedings will be published in Washington Municipalities from time to time.

RESOLUTIONS ADOPTED

The Convention adopted resolutions:

(1) Commending its officers and committees for their past year's work and especially endorsing the work of the Secretary-Treasurer, Dr. H. G. A. Braner.

(2) Expressing its appreciation of the assistance and co-operation of the University of Washington, particularly in relation to its publication of "Washington Municipalities," edited by Dr. Braner.

(3) Expressing appreciation of the cordial hospitality of the City of Everett and its officials, and of the Everett Commercial Club.

(4) Creating a section of the City Planning Conference of the League to be designated "Building Construction, Housing and Fire Hazard."

(5) Providing for the appointment of a special committee to consider ways and means of putting into effect the fundamental principles of city planning and to draw up uniform planning ordinances for the cities of the State.

(6) Providing for the appointment of a committee to draw up a model ordinance to standardize traffic on streets and highways.

(7) Requesting the Legislature to amend certain laws so as to permit levying a tax not to exceed 18 mills in second class cities, and in third class cities not to exceed 15 mills.

(8) Recommending enactment into law of the bill dealing with regulation of water supplies and sewage under State Board control.

(9) Requesting the Legislature to pass a law permitting cities to establish stockades and work their prisoners on property owned by such city outside its corporate limits, and permitting city and county officials to co-operate in the establishment and maintenance of stockades for the housing of prisoners outside the city limits.

(10) Opposing Referendum Measure No. 7, known as the "Certificate of Necessity and Convenience Law," as being inimical to the interests of the municipalities of the State for numerous reasons specifically named.

(11) Opposing Referendum Measure No. 9, known as the "Budget Law," for numerous stated reasons.

The proposed whole time health officer bill was referred to the legislative committee of the League; also the municipal home rule provisions prepared and recently published by the Municipal Program Committee of the National Municipal League.

INDEX TO VOL. XXX

	PAGE
Accounting System of the State, by W. D. Hamman.....	341
Address by Christopher Bradley, Esq., at Visalia.....	517
Advice on Street Lighting.....	152
Advice to New Trustees.....	114
Alameda's Proposed Charter.....	207
Assessing Property, methods of.....	61-68
Assessment Roll, form of, by H. A. Bewley.....	221
Assessment Rolls, the correction of.....	220
Bakersfield's City Manager, report of, by W. M. Morgan.....	446
Berkeley's New Zone Ordinance.....	374
Bill Boards, eliminating.....	298
Bill Board Nuisance.....	345
Bone Retaining Wall Patent.....	323
Book Reviews.....	533
British Municipal Ideals, by R. V. Harris of Halifax.....	227
Budget Making.....	219
Building Construction as Affecting Fire Risks (illustrated), by C. F. Wieland.....	182
Business Management of Cities.....	236
Burlingame's 1916 Street Jobs.....	72
Cameron Septic Tank Company, letters from.....	117
Cameron Septic Tank Company, letters from.....	25-28
Cameron Septic Tank Company, reply to letter.....	71
Cement Firm Sued.....	380
Cement Trust, pernicious activity of.....	380
Census Report of California Cities, by Joseph H. Quire.....	261
Charter for Los Angeles, proposed.....	141
Charter Proposed for Alameda.....	207
Child Welfare, by Mary Ritchie of Halifax.....	234
Chicago Civic Co-Operation Scheme.....	224
Cleaning Lots and Planting of Trees (illustrated).....	153
City Manager Idea, by H. A. M.....	220
City Manager of San Rafael.....	124
City Manager Plan, by Lyman M. King.....	144
City Manager Plan Outlined, by Professor Reed.....	150
City Manager, report of.....	442
City Planning Commission of San Anselmo, report of.....	287
Civic Co-Operation in Chicago.....	224
Contents of Volume 30.....	528
Delegates at Visalia Convention.....	423
Department of Public Health Program.....	401
Departments of Engineers, Councilmen and Street Superintendents.....	487
Dairy Inspection.....	219
Dayton's Form of Government.....	139
Durable Iron (illustrated), by L. E. Kittle.....	110
Economy in Municipal Government.....	115
Franchises and Public Utilities, Conclusions of National Municipal League.....	74
Glendale's City Manager, report of, by T. W. Watson.....	446
Ground Water Supplies and Wells, by Arthur L. Collins.....	21
Guarantee of Pavement (continued), by George C. Warren.....	97
Guaranteeing Pavements, by George C. Warren.....	50
Health Officers, Value of Giving Whole Time, by Dr. Thos. D. Tuttle.....	381
High Cost of Materials.....	332
Housing in England, by Harvey N. Shepard.....	43
Improvement Bond Act of 1915, Collecting Assessments Under, by H. A. Bewley.....	223
Improvement Bond Act of 1915, Valid.....	178
Lighting of Business Streets (illustrated), by C. H. Tallant.....	106
Lighting of Streets, by Charles T. Phillips.....	91
Lighting Streets (illustrated), by H. E. Mahan.....	171
Lighting Rates in San Jose.....	69
Los Angeles, Proposed New Charter for.....	141
Methods of Assessing Property.....	61-68
Modern Street Lighting Systems (illustrated), by Fred W. Rea.....	300
Monroe Calculating Machine, Exhibit of.....	331
Motor Vehicle Act, Not Observed.....	297

	PAGE
Municipal Achievements of 1915	4-20
Municipal Ideals in Great Britain, by R. V. Harris of Halifax	227
Municipal Information from New York City, by W. P. Capes	264
Municipal Research in San Francisco, by Fred W. Eckart	258
Nashville's Paving Suit	308
National Septic Process Protective League	306-398
New Trustees, Advice to	114
New York City's Zone Ordinance	392
New York, Report of Municipal Information Bureau, by W. P. Capes	264
Odorless Sewer System Patent	24
Pasteurizing Milk, Value of, by Harold E. Gray	233
Patented Sewer System of James Scofield	24
Pavement Guarantees, by George C. Warren	50
Pavement Guarantees (continued), by George C. Warren	97
Penalizing Violators of Fire Marshal's Orders	346
Plan Improvements Now, by Arthur L. Collins	339
Preferential System of Voting in Santa Monica	26
Preferential Voting, Advantages of	473
Preferential Voting, Cities Using	475
Program of Health Department	401
Program of Visalia Convention	385
Public Expenditures, by Hon. John S. Chambers	500
Public Health and the Somers System	191
Public Utilities and Franchises, Conclusions of National Municipal League	74
Report of Cities	431
Report of Secretary	430
Richmond's City Engineer, Annual Report of	303
Richmond's Milk Ordinance	151-181
Sacramento's City Government, by Professor Reed	150
San Diego's City Manager, Report of	296
San Jose's City Manager, Report of, by Thos. H. Reed	452
San Jose's Lighting Rate Case	69
San Jose's Unemployed, How Dealt With, by F. C. Mills	292
San Rafael's City Manager	124
Schofield's Odorless Sewer System Patent	24
Secretary's Report	430
Sensible Speed Signs	113
Sewer System Patent, Odorless	24
Should You Plan Your Improvement Now? by Arthur L. Collins	339
Slanderers of the City	122
Smoothering Out Wavy Streets	515
Somers System of Public Health	191
Stafford, J. G., Tax Valuation Methods	333
State Highway Commission Report	376
State Housing Commission, Report of Mr. Cohn	440
Statistics of Municipal Refuse for Los Angeles	492
Street Improvement Bond Act of 1915, Valid	178
Street Lighting Advice Available	152
Street Lighting, by Charles T. Phillips	91
Street Lighting (illustrated), by H. E. Mahan	171
Street Lighting Systems, Modern (illustrated), by Fred W. Ren	300
Taxation, by J. J. Pastoriza	256
Tax Valuation Methods, by J. G. Stafford	333
"Thank-You-Marms" for Grade Crossings	396
The High Cost of Supplies to Municipalities, by J. E. Byxbee, Jr.	509
Tree Planting and Lot Cleaning (illustrated)	153
Tree Planting in Glendale (illustrated)	153
Unemployed in San Jose, How Dealt With, by F. C. Mills	292
Value of Pasteurizing Milk, by Harold E. Gray	233
Vehicle Act, Non-observance of	297
Visalia, Accommodations at	330-373
Visalia Convention, Address of Welcome	428
Visalia Convention, Address of President	426
Visalia Convention, Report of Cities	431
Visalia Convention, Delegates Present	423
Visalia Convention, Program of	385
Visalia Convention, Resolutions Adopted	456
Visalia, the Convention City	251
Visalia Meeting, Proposed Program for	326
Washington Municipalities, Program of	404
Water Supplies, Ground Water and Wells, by Arthur L. Collins	21
Whole-Timed Health Officers, Value of, by Dr. Thos. Tuttle	281
Washington Municipalities, League of	23, 526
Zone Ordinance of New York City	392
Zone Ordinance of Berkeley	374

TITLES OF NEW ORDINANCES RECEIVED

NOTE:—These ordinances will be loaned to any city or county official in California or to any of the city officials of Oregon, Washington, Idaho or Montana, upon application to Pacific Municipalities, Pacific Building, San Francisco, accompanied by a self-addressed stamped envelope, upon condition of their prompt return after using. City attorneys are urged to make free use of this service.

Motor vehicles, regulating operation of transferring passengers or freight. Nevada County, 1443.

Merchandise, making untrue statements when offered for sale. Santa Ana, 1444.

Fire Marshall, creating office and defining duties of. Albany, 1445.

Oranges, regulating and providing for the shipment and inspection of. Riverside County, 1446.

Plumber, defining business of master plumber and requiring a license from person engaged therein. South Pasadena, 1447.

Motor busses, requiring license and regulating operation of. South Pasadena, 1448.

Milk, to prevent sale of impure milk and providing rules and regulations thereof. Tulare, 1449.

Fire limits, establishing and providing protection therein. Cloverdale, 1450.

Fire Department, establishing and making it unlawful to interfere with members while on duty. Vacaville, 1451.

Bread, regulating sale of and establishing standard of weight. Orange County, 1452. Riverside County, 1452. Anaheim, 1452.

Traffic, governing on mountain highways. San Mateo County, 1453.

Ice, requiring vendors of to have scales tested by county sealer of weights and measures. Anaheim, 1454.

Streets, adopting specifications for grading and paving of. Huntington Beach, 1455.

Buildings, providing for and regulating removal of dilapidated and dangerous. Livermore, 1456.

Oranges, regulating packing, selling and shipping of. Tulare County, 1457.

Electric conductors, providing for placing underground. Sacramento, 1458.

Fertilizer potash and other products from kelp, regulating business of manufacture of. Santa Barbara County, 1459.

Gasoline and oils, preventing leaking of on streets from automobiles. Sacramento, 1460.

Fortune teller, palmist, etc., prescribing a license for. Sacramento, 1461.

Brush, leaves, straw, etc., prohibiting burning on any street, alley or lot (amending). Sacramento, 1462.

Traffic, regulating on public highways. San Leandro, 1463.

Motor vehicles, regulating and licensing the business of transporting passengers. Riverside, 1464.

District, establishing in which motor vehicles for transporting passengers may run. Riverside, 1464.

Business licenses. Lemoore, 1465.

Nuisances, defining and making the maintenance of same unlawful. Long Beach, 1466.

Kelp, fish, oil, etc., declaring burning of to be a public nuisance. Long Beach, 1466.

Furnace, oven bleacher, etc., the maintenance of where noxious fumes are emitted declared to be a public nuisance. Long Beach, 1466.

Health, anything injurious to declared to be a public nuisance. Long Beach, 1466.

Minors, regulating appearance on streets after 8:30 p. m. El Monte, 1467.

Gasoline, regulating keeping of. Albany, 1445.

Fuel oil, regulating use of. Albany, 1445.

Shooting galleries, defining and regulating public. Anaheim, 1468.

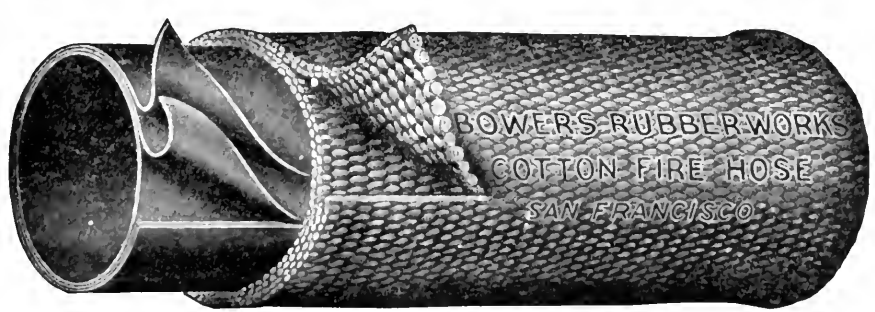
Intoxicating liquors, regulating general sale of. Livermore, 1469.

Buildings, alterations, etc., prohibiting erection of without obtaining a permit. Sacramento, 1470.

Statements, how to file. Oakland, 1471.

Franchise permits, etc., specifying matter of paying of percentage of receipts for. Oakland, 1471.

Street, establishing the grade of. Livermore, 1472.

"VICTOR"	"RELIANCE"	"GUARDIAN"
		
<p>Made in California</p> <div style="display: flex; justify-content: space-between;"> Bowers Rubber Works San Francisco </div>		

∴ What Our Pacific Coast Cities Are Doing ∴

Alameda received bids Nov. 28 for furnishing Department of Electricity with a water softener or purifier and a Venturi water meter. Board of Education received bids Dec. 3 for furnishing a heating system in the Mastick School.

Albany, Cal., will receive bids December 18 for 500 feet of fire hose.

Bakersfield received bids November 27 for a 6-inch vitrified salt glazed sewer. Data is being gathered for an ornamental lighting system. Bids will be received by the Board of Education for a heating system. On Nov. 27 bids were received for one automobile for use of the Chief of Police.

Brawley will shortly call an election to vote \$17,000 bonds for a new pump to be installed at the pumping plant.

Calexico received bids December 5 for a lot of cast iron pipe.

Chico has voted to place luminous arcs on Main Street at cost of \$8,000.

Chino has commenced proceedings for paving several blocks of streets.

Coalinga has voted \$100,000 for a water works system.

Colusa has voted \$85,000 for a grammar school building.

Compton received bids November 28 for furnishing necessary school supplies for year ending June 30, 1917.

Coronado Beach is planning the construction of an ornamental lighting system.

Daly City received bids November 27 for paving, curbing and constructing sewers on several streets.

Fresno received bids November 29 for one motor-driven street sweeper.

Fillmore will receive bids December 16 for construction of four miles of 5-foot sidewalks and curbs.

Hanford will shortly begin the paving of sixty blocks of streets at estimated cost of about \$200,000. An election will be held shortly to vote \$30,000 bonds to extend the fire mains.

Hayward is about to take preliminary steps for construction of municipal water works.

Jackson is considering construction of concrete dam to provide against flood.

Martinez is contemplating the installation of a lighting system.

Marysville city council has taken action looking toward installation of sanitary drinking fountain. New garbage wagons are to be furnished, thereby improving garbage collection system.

Merced is agitating street improvements.

Oakland Board of Education received bids November 27 for school equipment.

Pasadena City Engineer is preparing plans for an experimental activated aerated sludge sewage treatment plant.

Pomona city council has appointed committee to secure signatures to petition to bond city for \$200,000 for drainage work and street improvements.

Richmond High School received bids December 4 for \$20,000 addition to the school. Bids were received on November 27 for construction of a seawall of clay in Richmond Inner Harbor.

Sacramento received bids November 28 for 23,750 barrels of fuel oil. On same date bids were received for the following: 2 motor-driven plain hose wagons and 1 motor-driven combination pumping engine and hose wagon with option of 40-gallon chemical engine outfit attached.

San Diego will have a concrete wall 5 feet high on top of Morena Dam.

San Jacinto has voted \$28,000 for paving 3½ miles of streets.

Santa Ana is contemplating a bond election to build bridge at cost of between \$10,000 and \$20,000.

Santa Barbara received bids November 16 for paving, guttering and constructing sewers.

Seal Beach will hold a \$45,000 bond election for installation of sewer system on December 21. A \$100,000 worth of paving will shortly be commenced to pave three miles of streets.

Upland received bids November 27 for constructing pavement on 14 blocks of Mountain Avenue.

Ventura has commenced preliminary steps for construction of bridge across the San Jon Barranca. A sewage disposal plant will be constructed shortly.

Whittier received bids November 20 for an ornamental lighting system.

CALIFORNIA COUNTIES.

Alameda County will receive bids December 18 for construction of fender piles at the Webster Street Bridge. Bids were received November 27 for construction of sewer along Spruce Street, Rose Street, and Walnut Street in Ocean View District.

Los Angeles County. East Whittier School District received bids November 25 for installing a heating and ventilating system.

Orange County received bids December 6 for construction of 2.53 miles of 18-ft. wide concrete pavement between Brea and Olinda.

San Bernardino County has ordered the construction of highway in Lytle Creek Canyon at estimated cost of \$56,000.

San Mateo County will receive bids December 8 for construction of two concrete culverts near the Belmont Military Academy. On same date bids will be received for construction of approximately 28,500 square yards of surface on certain roads. Also on same date bids will be received for construction of reinforced concrete culvert on the Alpine Road.

Santa Barbara County received bids December 4 for fencing the Harris Station, Lompoc Road.

Napa County will receive bids December 13 for grading and construction of road in Mt. Veeder Permanent Road Division.

Tehama County received bids November 15 for construction of four bridges on the Lassen road. A \$150,000 bond election may be held for construction of court house.

Tulare County may shortly ask for bids for construction of six bridges on State Highway. Bids were received on November 24 for construction of bridge over Farmer's Gulch. On same date bids were received for bridge over Cottonwood Creek. On December 6 bids were received for construction of one-story brick comfort station.

Ventura County received bids December 5 for construction of Wheeler Canyon Bridge. On December 9 bids will be received for extension of Arundell Barranca culvert on Old Canejo Road. On December 5 bids were received for construction of 6.01 miles of road on Division 4.

Yolo County may hold a \$1,250,000 bond issue for a lateral sewer system.

Yuba County has accepted plans and specifications for macadamizing 3000 feet of roadway: \$5,000 has been appropriated for repairing two miles of road in the Oroville-Bangor Road.

BOOK REVIEWS.

"The Disposal of Household Wastes," by Dr. Wm. Paul Gerhard, C. E., consulting engineer for sanitary works, New York City. This is the third edition of a small handbook, corrected to date, of a little book written by the author in 1890, and is devoted to the important question of a safe and sanitary disposal of the liquid and solid household wastes, particularly of country houses. The author has no patented systems or "pet schemes" of his own, but devotes his attention to a description of the best known methods. The little book would make a valuable addition to the library of municipal engineers and health officers. It is published by the D. Van Nostrand Company, 25 Park Place, New York. 195 pp. Price 50 cents net.

"The Water Supply of Country Houses," by Dr. William Paul Gerhard, C. E., is a reprint in pamphlet form of an article published and copyrighted by The Review of Reviews Company. It appears to cover the subject thoroughly and contains many ideas of value, especially for engineers who devote particular attention to this branch of the profession. Published by the Trow Press, New York. 52 pp. Price 40 cents.

"Sanitation, Water Supply and Sewage Disposal of Country Houses," by Wm. Paul Gerhard, C. E. This book shows the man who lives in the country what to do. It treats first of the general sanitation of country houses, and shows the relation of the soil, the subsoil, surface drainage, aspect, surroundings, lighting, heating and ventilation, water supply, sewage, etc., to a healthful home. Detailed advice is given on how to obtain a satisfactory water supply. The sources of water, the various modes of raising and storing it and its distribution are dwelt on at length. The all-important question of sewage disposal for houses not in reach of sewers is taken up carefully, and all the latest developments in the methods of disposal are given particular attention. Throughout the book excellent illustrations accompany all descriptions of examples taken from actual practice.

D. Van Nostrand Company, 25 Park Place, New York. 12 mo., cloth. 348 pages. Price \$2.00 net.

WANTED

Position as City Engineer or City Manager or both, by competent graduate engineer, wide experience, now employed as City Engineer and Manager. Desire larger City.

Address
Pacific Municipalities

Sewers Flushed Automatically, an Insurance Against Unsanitary Conditions

MILLER FLUSH-TANK SIPHONS

are perfectly automatic, simple in construction
Always reliable

We make Sewage Disposal Controls

SEND FOR CATALOG OF OUR LINE

PACIFIC FLUSH TANK COMPANY

REPRESENTATIVES
Imhoff Patented Tanks

4241-43 East Ravenswood Ave., CHICAGO
NEW YORK

WILLIAM DOLGE

Certified Public Accountant
Municipal Accountant

Audits, Examinations and Special Examinations. Accounting Procedures
for Municipal Utilities. Budget Systems Installed.

TELEPHONE SUTTER 697

Insurance Bldg., 311 California St.

San Francisco, Cal.

7 REASONS

why dealers should advertise in

Pacific Municipalities

- 1—**Pacific Municipalities** is the only magazine on the Pacific Coast which is devoted exclusively to municipal engineering and contracting.
- 2—**Pacific Municipalities** has a larger circulation than any other magazine of its kind in the country.
- 3—**Pacific Municipalities** is the official organ of the League of California Municipalities which, according to the National Municipal League, is the most successful organization of its kind in the United States.
- 4—**Pacific Municipalities** reaches every city official of the State of California, and all the leading contractors and engineers of the Pacific Coast.
- 5—**Pacific Municipalities** maintains for its advertisers a free up-to-date information bureau of proposed work and supplies needed.
- 6—Advertisements in **Pacific Municipalities** are money makers.
- 7—The rates in **Pacific Municipalities** are right.

Mention "Pacific Municipalities" when writing for catalogs.



SERVICE



Resists Rust FIRST



ARMCO IRON Full Circle Part Circle CULVERTS

A neat and permanent improvement to any street or roadway.
Quickly and easily installed at a low cost. Particulars covering various sizes and gauges sent on request.

California Corrugated Culvert Company

411 Leroy St., LOS ANGELES

400 Parker St., WEST BERKELEY

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of Pacific Municipalities, published monthly at San Francisco, for October 1, 1916.

County of San Francisco, } ss.
State of California,

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Wm. J. Locke, who, having been duly sworn according to law deposes and says that he is the managing editor of the Pacific Municipalities and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, A. Carlisle & Co., 251 Bush St., San Francisco.
Editors, H. A. Mason and Wm. J. Locke, Pacific Building, San Francisco.
Managing Editor, Wm. J. Locke, Pacific Building, San Francisco.
Business Manager, F. J. Erb, Pacific Building, San Francisco.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) H. A. MASON & WM. J. LOCKE.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) There are none.

WM. J. LOCKE.

Sworn to and subscribed before me this 7th day of October, 1916.

(SEAL)

(My commission expires Feb. 1st, 1918.)

HENRY B. LISTER.

RELIABLE FIRMS

The firms mentioned below specialize in municipal work or furnishing supplies for the same. They bear a good reputation for reliability and fair dealing. In case of proposed work or needing supplies you are urged to write them. Catalogs sent on request.

Asphalt Machinery

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Asphalt Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Architectural Terra Cotta

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Bitulithic Pavement

Warren Brothers Company, California Bldg., Los Angeles.

Brick—Face and Fire

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Cast Iron Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Cement Testing

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Concrete Mixers

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Consulting Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Culverts

California Corrugated Culvert Co., Los Angeles and West Berkeley.
American Corrugated Culvert Co., 706 Hobart Bldg., S. F.

Drain Tile

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Dump Carts and Wagons

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Engravers and Bond Printers

A. Carlisle & Co., 251 Bush St., S. F.

Fire Hose

The Gutta Percha & Rubber Mfg. Co., 34 Fremont St., S. F.
Bowers Rubber Works, 68 Sacramento St., S. F.

Flushers

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Flush Tanks

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.
Pacific Flush Tank Company, Chicago and New York.

Gas Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Hollow Tile

Gladding, McBean & Co., Crocker Bldg., S. F.
N. Clark & Sons, 112-116 Natoma St., S. F.

Imhoff Tanks

Pacific Flush Tank Co., Chicago and New York.

Inspection and Tests

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric Bldg., Portland; Colman Bldg., Seattle; Pauslen Bldg., Spokane.

Municipal Engineers

Sloan & Robson, Nevada Bank Bldg., S. F.

Municipal Printers

A. Carlisle & Co., 251 Bush St., S. F.

Ornamental Lighting Systems

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric Bldg., Portland; Colman Bldg., Seattle; Pauslen Bldg., Spokane.

Pavements

Warren Brothers Co., California Bldg., Los Angeles.
City Street Improvement Co., Whittell Bldg., S. F.

Pavement Materials

Warren Brothers Co., California Bldg., Los Angeles.

Pipe

United States Cast Iron Pipe & Foundry Co., Monadnock Bldg., S. F.

Pressed Brick

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.

Road Machinery

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Scarifiers

The Good Roads Machinery Co., 1017 Hearst Bldg., S. F.

Septic Tanks

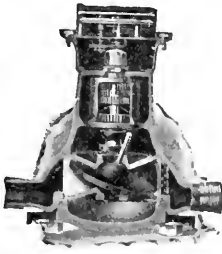
Pacific Flush Tank Company, Chicago and New York.

Sewer Fittings

Pacific Flush Tank Company, Chicago and New York.

Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg., S. F.



TRIDENT DISC

**Over 128,000 Made and Sold
in 1915**

A record unsurpassed in the history of
the Meter Business

Manufactured by

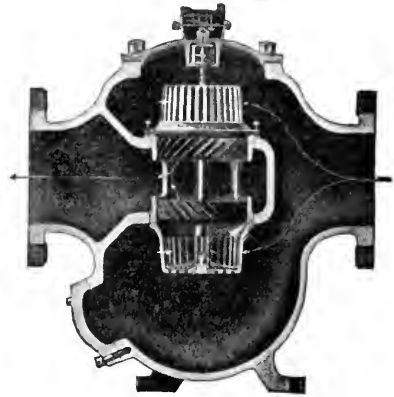
NEPTUNE METER CO.
NEW YORK

Pacific Coast Branches at PORTLAND, SEATTLE,
SPOKANE, SAN DIEGO

LOS ANGELES OFFICE AND WAREHOUSE
No. 411½ East Third Street

TRIDENT METERS FOR ALL SERVICES

Split Case Meters for Warm Climates
C. I. Breakable Frost Bottoms for Cold Climates
Hot Water and Oil Meters Crest Meters for Large Flows
Compound Meters for all Streams, Large and Small



TRIDENT CREST
SAN FRANCISCO OFFICE
320 Market Street

Sewer Systems

Sloan & Robson, Nevada Bank Bldg., S. F.

Sewer Tools

The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Road Oilers

The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Rock Crushers

The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Roofing Tile

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

Sprinkling Wagons

The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Street Lighting

General Electric Co., Rialto Bldg., S. F.;
724 S. Spring St., Los Angeles; Electric
Bldg., Portland; Colman Bldg., Seattle;
Pauslen Bldg., Spokane.

Street Sweepers

The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Testing Materials

Robt. W. Hunt & Co., 251 Kearny St., S. F.

Water Meters

Neptune Meter Company, San Francisco
and Los Angeles.

National Meter Co., 141 New Montgomery
St., S. F.

Water Pipe

United States Cast Iron Pipe & Foundry
Co., Monadnock Bldg., S. F.

Weed Killers

Atlas Preservative Company of America,
Rialto Bldg., S. F.

Street Signs

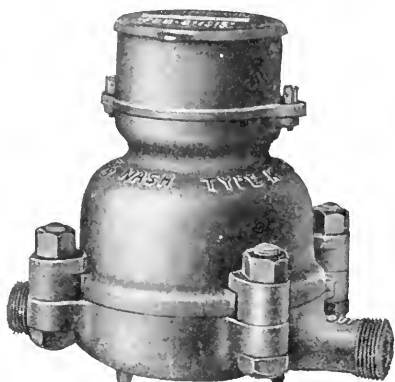
The Good Roads Machinery Co., 1017 Hearst
Bldg., S. F.

Vitrified Sewer Pipe

N. Clark & Sons, 112-116 Natoma St., S. F.
Gladding, McBean & Co., Crocker Bldg.,
S. F.

WATER METERS

SPECIALLY ADAPTED TO EVERY KIND OF SERVICE
IN SIZES FROM $\frac{3}{8}$ INCH TO 60 INCHES



Crown, Empire, Nash, Gem, Premier
Water Meters, Empire Hot Water, Oil
and Gasoline Meters, Empire Com-
pound Meters.

TYPE K NASH METER

Embodies the Highest Development in
Disc Water Meters. Liberal Propor-
tions. Rigid and Simple Construction.

Extreme Accuracy on Large and Small-
est Flows. Can be taken Apart with-
out Removing From Service.

National Meter Co.

ESTABLISHED 1870

141 NEW MONTGOMERY ST.

SAN FRANCISCO, CAL.

NEW YORK by Rail and Ocean

Fares Same as All Rail, But Includes Berth and Meals Five Days on Steamer

TAKE "Sunset Limited" (No Extra
Fare)

FROM SAN FRANCISCO 4:20 P. M.
(Ferry Station)

Via SUNSET ROUTE to NEW ORLEANS

And There Connect With

Southern Pacific's Splendid *Ocean Liners*

Sailing Wednesdays and Saturdays to

NEW YORK

For Fares and Berths
Ask Agent

SOUTHERN PACIFIC

Mention "Pacific Municipalities" when writing for catalogs.

GOOD ROADS

We have opened our own factory branches here on the Coast, both at San Francisco and Los Angeles with Warehouses at both points where a full line of our machinery as well as repair parts are kept on hand. We invite correspondence and investigation believing that we can convince anyone by that best of all tests, the test that we have accomplished, that our machinery is the most satisfactory to buy because it is by long odds the most economical to use.

Our more than thirty-five years' experience in designing and constructing road and street-making machines and appliances is your assurance of the utmost in value and efficiency; and our liberal guarantee with every machine and constant interest in its performance is your pledge of satisfactory service. Our interests are mutual—you want to build GOOD ROADS; we want to sell the machinery that builds only "GOOD ROADS".

We thank our host of friends among the Road and Street Builders, Contractors and Quarrymen for their past favors and their generous support, and it will be at all times our highest aim to merit a continuance of their patronage.

The Good Roads Machinery Company, Inc.

1017 HEARST BUILDING, SAN FRANCISCO, CALIF.

DURABILITY

ECONOMY

QUALITY

CAST
IRON

PIPE

3 inch to 84
inch, for
Standard and
High Pressure

WATER
GAS

Fire Protection
Sewers

Irrigation
Culverts

POWER
PLANTS

Bell and Spigot, Flexible Joint Pipe, Large
Cylinders, Heavy Castings

United States Cast Iron Pipe & Foundry Co.

San Francisco Office:
Monadnock Bldg.

Northwest Office:
Northwestern Bank Bldg., Portland, Ore.

General Offices:
Burlington, N. J.

Mention "Pacific Municipalities" when writing for catalogs.

N. CLARK & SONS

INCORPORATED 1889

Manufacturers of

ARCHITECTURAL TERRA COTTA, PRESSED BRICK
VITRIFIED AND TERRA COTTA PIPE
HOLLOW TILE FIRE PROOFING
FIRE BRICK TILE AND KINDRED CLAY PRODUCTS

Office: 112-116 Natoma St. WORKS:
WEST ALAMEDA **SAN FRANCISCO**

FIRE HOSE

The GUTTA PERCHA & RUBBER MFG. CO.

34 FREMONT ST., SAN FRANCISCO, CAL.

SLOAN & ROBSON, *Engineers*

Reports, Designs, Estimates and Supervision of Municipal
Light, Water and Sewer Systems

Telephone Kearny 4646

Nevada Bank Building, SAN FRANCISCO

Robert W. Hunt

John J. Cone

Jas. C. Hallsted

D. W. McNaugher

Robert W. Hunt & Co., *Engineers*

Bureau of Inspections, Tests and Consultations

Chemical and Physical Laboratories

New York London
Vancouver, B. C.

Chicago

Pittsburg

St. Louis

Los Angeles

Montreal

Mexico City

Seattle

Dallas

251 Kearny St., San Francisco

Tests and Inspections of Construction Materials, Steel, Iron, Cement, Stone, Sand,
Asphalt, Etc. Particular Attention paid to Municipal and County requirements

TERRA COTTA, PRESSED BRICK, PIPE,

FIRE PROOFING, ROOFING TILE,

FLUE LININGS, FIRE TILE,

LAUNDRY TRAYS,

ETC.

GLADDING, McBEAN & CO.

WORKS

LINCOLN, CAL.

--- OFFICE ---

CROCKER BLDG., SAN FRANCISCO.





